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ABSTRACT

This special issue of the bulletin "Early Georgia" provides a partnership of educators and archaeologists to show how archaeology can be translated into the classroom. The multidisciplinary nature of archaeology allows Georgia educators to address many of the Quality Core Curriculum objectives mandated by the state. The book is divided into four chapters, including: (1) "Narratives," written by educators, based on their experiences with archaeology in the classroom; (2) "Exercises," offering exercises and activities to be included in multidisciplinary curriculums; (3) "Bibliographic and Curriculum Materials," containing a list of sources for educators ranging from books and exhibits to curriculum materials; and (4) "Archaeological Ethics," summarizing ethical principles that should guide the practice of archaeology. (EH)

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EARLY GEORGIA

Volume 20, Number 1
1992

Special Issue

Used Archaeology: Practical Classroom Ideas for Teachers, by Teachers

Published by
The Society for Georgia Archaeology

SO 028 219

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Guest Editor: Rita Folse Elliott

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Foreword

Welcome to a new partnership! The past decade has seen a growing relationship between the world of professional educators and professional archaeologists—a relationship that can be mutually beneficial. The growing crisis in our schools, symbolized by low test scores, high drop-out rates, drugs, violence, and boredom, and fueled by economic problems, decreases in federal and state educational funding, latch-key students, single-parent families, students living below the poverty level, lack of role models, and over-indulgence in television, has thrown educators into a precarious and unenviable position.

At the same time, archaeologists are struggling with major assaults on non-renewable cultural resources throughout the country. Intensive development, particularly in the sunbelt region of the southeastern United States, destroys countless archaeological sites daily—sites unprotected by federal and state laws. Site vandals and "looters" trash archaeological sites while searching for intact or unusual artifacts that they hope will bring a hefty price in the collectors' market. An increasingly weak economy has led to major cut-backs in government and private grants supporting archaeological research.

The unpleasant dilemmas faced by both educators and archaeologists have resulted in an amazing revelation. These two seemingly unconnected problems can be addressed simultaneously. Archaeology is a wonderful medium for enticing students to learn because it is exciting, adventurous, and mysterious. Archaeology is the perfect vehicle for educators because its multidisciplinary nature allows it to address many of the Quality Core Curriculum objectives mandated by the state of Georgia, including visual arts, science, English and Language Arts, Mathematics, and Social Studies. It improves students' skills in logic, interpretation, research, and problem solving while enabling students to become aware and tolerant of other cultures, work together in groups, improve self-confidence, and actually discover that learning can be fun!

Students, however, are not the only beneficiaries of an archaeology curriculum in the classroom. Archaeologists finally will be able to enjoy the rewards of a grass-roots archaeological education. An educated and informed public is a public that will support legislative protection of archaeological sites. It is a public that will slowly turn from artifact collectors to site recorders, from purchasers of illegally obtained artifacts to prosecutors of site vandals. Some in the archaeological community protest the introduction of archaeology into the school system on the basis that "a little knowledge is a dangerous thing". What better rebuttal is

there than examining the status quo? Dedicated educators (and everyone who embraces an archaeology curriculum) know and stress the importance of site preservation, ethics, and professional supervision. What better or more numerous heralds could the professional community have than educators throughout the state and the country?

Volume 20, Number 1 of *Early Georgia—Used Archaeology: Practical Classroom Ideas for Teachers, by Teachers* has been prepared with the goals of both educators and archaeologists at the forefront. It is hoped that it will help fill a void in the state of Georgia and perhaps be a useful model or stepping stone for others with the same aims. It is divided into four chapters. The first is a series of narratives by educators based on their experiences with archaeology in the classroom. It offers an example of what is possible for those who are interested, and evidence of success for those who disbelieve. The second chapter of *Used Archaeology* contains exercises and activities that can be included in multidisciplinary curriculums. Many of these have been borrowed or adapted from the Louisiana and South Carolina classroom guides, and archaeological newsletters; some are original. The third chapter is a list of sources for the educator ranging from books to exhibits to curriculum materials to a host of other items. Chapter IV summarizes ethical principles that should guide the practice of archaeology.

I would like to thank all those involved in making *Used Archaeology: Practical Classroom Ideas for Teachers, by Teachers* possible. The authors spent a great deal of time writing their articles and submitting bibliographies and activities. Ms. Linda Turner, Lanier Elementary School, Gainesville, and Ms. Anita Oravec, Mansfield Elementary School, Mansfield, contributed background information on educational activities. Ms. Leet Burns, Curriculum Director, Effingham County, loaned the voluminous Quality Core Curriculum Guide for study. Ms. Lynn Harris, Underwater Archaeology Division, South Carolina Institute of Archeology and Anthropology, promptly forwarded a copy of the South Carolina Classroom Guide to Archaeology, which provided ideas for this issue of *Early Georgia*. Ms. Nancy Hawkins, Louisiana Staff Archaeologist, wrote the classroom guide for that state. Hers was one of the first such books, and many of the activities in this volume were borrowed from her guide. Additional material was gathered from the educational groups of national, professional archaeological societies and the federal government. Dr. Jack Wynn offered a list of educators to contact for article submissions. Sr. Jackie Saindon graciously provided lists of educators and curriculum materials from LAMAR Institute Teacher Workshops.

Dr. David Hally, Managing Editor, brought this special issue to press.

A special thank you is extended to Dr. Steve Kowalewski, Editor, for offering the guest editor the opportunity to undertake this project, for his continual assistance throughout its evolution, and for his realizing the need for such a manual, and for taking action to fill this educational void.

Used Archaeology: Practical Classroom Ideas for Teachers, by Teachers is dedicated to all the educators facing the challenge of teaching today. May they turn potential drop-outs and future archaeological site-looters into educated, responsible preservationists with a hunger for learning and an appreciation of the past. For all the educators who make a difference, with the hope that the Society for Georgia Archaeology might also. Good luck!

Rita Folse Elliott
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Royston, GA 30662

Chapter I: Narratives

INTRODUCTION TO THE NARRATIVES

The narrative chapter of *Used Archaeology: Practical Ideas for Teachers, by Teachers* is intended to give the reader a small glimpse into the classrooms of some of the educators using archaeology in their curriculums. They have tried to capture the excitement of their students and the many rewards resulting from such curriculums (on both the part of the students and the teachers!). The narratives include articles by two elementary teachers, three middle school teachers, two college professors, a high school student, a graduate school student, and an archaeology workshop leader. This diversity was intentional to demonstrate that an archaeology curriculum is workable and successful on many levels and to many degrees.

Adventures in Elementary Archaeology

Michael C. Turner
Lanier Elementary School
Gainesville, GA

PROLOGUE: CULTURE SHOCK. *Surrounded, there are close to thirty of these little beings starring at me with piercing saucer-like eyes. Are they the legendary neophytes of this civilization's age-old ritual? A bead of perspiration runs down my back. Do they consider me a friend or a foe? What right do I have to be in this sacred place of curiously familiar looking artifacts? Carefully I survey their faces. Thoughts run rapidly through my brain. What are their intentions? Why are they here? What do they want from me? Do I wait for them to make the first move, or do I? If I make the wrong move I may not have a second chance. Ignorance and superstition run rampant in this society, that some call modern. How much indoctrination have they had? What do they truly know about the outside world, or for that matter, of their own culture? If they are like members of most societies they most likely have some nuclear family customs, beliefs, and perhaps, rituals. But have they developed beyond these most basic cultural elements? If they have, then I stand a good chance of scraping through this intact and if not, who knows?...Well, it looks like I'm going to have to make the first move. They are not budging from those seated altars.*

Now, if I can just remember that special incantation I deciphered from the ancient writings. Ah, yes! And now if I can manage to reach that green wall of imitation slate to which this culture gives almost ritualistic homage. So far, so good...I hope. At last, I'm at their sacred green wall. Now if this white cylindrical amuletic writing tool belonging to a long line of loyal scribes still works, and if these little beings can read the ancient script...[Carefully, ritualistically, the daring adventurer inscribes the sacred board with white symbols to form the immortal words that he hopes will be intelligible to the now restless beings, words that he prays will unite the two cultures. The diminutive beings seem a bit puzzled. The fedora crowned figure translates the script...] "Good Morning Class! Welcome back to school. I am your teacher, Indiana...., Er, that is, Mr. Turner" (from "Indiana Turner and the Blackboard Cult" by Michael C. Turner, © 1992,

Galactic Vision).

Archaeology. The very name evokes images of adventurous expeditions to exotic, far-away places to uncover ancient ruins and artifacts. Archaeology as a recognized and methodical science, however, has existed for less than a century, and yet it has made great strides in its own development and in the data that it has contributed to the scientific community.

Today public interest in archaeology is great, especially after Lucasfilm's three Indiana Jones adventure movies. Interest is likely to increase with the new ABC television series, *The Young Indiana Jones Chronicles*, (a production of Lucasfilm Ltd. in association with the Network Television Division of Paramount Pictures). The *Chronicles* has a target audience of middle grades through high school-age young people. These adventures are intended to be educational, since one goal of the producers is to motivate students to become more personally involved in history, culture, and perhaps archaeology. The National Education Association endorses this television series as potentially useful within the classroom curriculum and has provided suggestions for implementing the series across the curriculum (NEA Today, February 1992: VOL 10, NO. 6).

Professional archaeologists might scoff at the mention of Indiana Jones as an archaeologist. True enough this fictional character neither measures up to the standards for modern archaeologists, nor would his methods of field archaeology be acceptable in today's organized science of archaeology. He may be given credit, however, for having stimulated the imaginations of many young people and the general public alike. Even if Indiana Jones is not the textbook archaeologist that established institutions of higher learning endorse he is perhaps responsible for stimulating the public's interest in archaeology and world history. As likely as not this type of motivation may lead many interested individuals to a lifetime of personal study and discovery in the true science of archaeology. Some scientists today admit that their initial encounter with the worlds of science were through science fiction. In some cases the science fiction of yesterday has become the science of today, e.g., space flight and exploration.

With proper precautions the world famous fictional Indiana Jones can be used in an educationally responsible manner to introduce students to the real world of modern archaeology and its scientific methods. The first thing a good educator must do before presenting any type of information to students is "get their attention." After having captured students' attentions and, perhaps imaginations, most topics will be of more personal interest to them.

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Motivation is the key to effective teaching and without it learning rarely has the positive effects desired.

Why teach younger, or even older students about archaeology? Archaeology offers not only the obvious knowledge pertinent to its field of study but also knowledge about a multiplicity of other disciplines. What archaeologist could function professionally without at least a general knowledge of most of the natural sciences? Additionally, space science technologies have recently proven to be viable tools for archaeologists in discovering the locations of ancient sites.

Students have a natural curiosity of the unknown. With proper guidance they can be encouraged to refine this search for the unknown, not only through standard school curriculums and subjects, but also through non-traditional curriculums, subjects, and learning activities. Most students have little or no exposure to the field of archaeology until college and then usually only if they are majoring in anthropology or another related field. This is no credit to our institutions of early learning, as archaeology can and should be a part of students early learning experiences.

What better vehicle to introduce students to cultural diversity, both past and present, than archaeology? Archaeology encompasses a multitude of disciplines that may be enlisted to help students explore the world of science and archaeology. As archaeology is a branch of anthropology, the study of people and their culture, it is ideally suited to assist students in their quest to uncover and bring to light the mysteries of their world and universe, especially present and past cultures. Archaeology focuses on the cultures of the past by the recovery and study of human artifacts and related cultural components. In many ways archaeology is a hands-on science. Students in elementary school learn best through hands-on and first-hand activities. By providing students with these types of archaeological learning activities instructors are matching learning style with the material to be learned.

In my classroom instruction of archaeology I take a multidisciplinary and multimedia approach. Students learn to use archaeology as a scientific discipline as they investigate their species' history and its effects on this planet. Further, students apply the techniques and knowledge they obtain from an organized study of archaeology to present-day cultures near and far. They are challenged to expand these concepts to possible future civilizations on this planet and to hypothetical ones throughout the universe. One project that I have developed, *First Contact*, asks students to explore the cultural effects from initial contact with sentient beings from another star system.

The following is a gleaning of some of the activities that I have used when integrating archaeology within the regular curriculum at

the elementary and middle school levels, specifically with fourth grade students.

Beginning with the first day of school each year, I start motivating my students to explore the fascinating world of archaeology. My classroom is a multidiscipline science and archaeology museum and research laboratory (Figure 1). The initial response I receive from anyone, young and old alike, is one of amazement that my classroom does not appear to be a "regular fourth grade classroom." Visitors cannot resist touring the room and, as often as not, picking up "artifacts" and inquiring about the function of each. This is precisely what I want, especially for my students. Immediately, I begin encouraging students to search for answers to their questions by observing, hypothesizing, analyzing, and experimenting. Very soon students learn that archaeology is the central theme in my classroom.

I share my own experiences in archaeology from childhood to present. I first became interested in archaeology as a young boy and have amassed a legal and legitimate surface collection of artifacts from various cultures. The majority of my artifacts are of Native American origin. I have collected these on property belonging to my family and property that I currently own. I keep accurate scientific records of my archaeological activities and relate the importance of this to my students (see "Collecting Artifacts from the Surface", later in this chapter).

Just to see students' eyes and their obvious fascination as they hold a piece of ancient cultural history is a personal delight. I know that I can now begin to help students develop a life-long interest in the true *science* of archaeology. Students often compare me to the only reference they usually have of an archaeologist, Indiana Jones. I allow them to express what they know and like about him without making the commandment, "Thou Shalt Not Call Indiana Jones an Archaeologist!" In time, of course, I help students understand that modern-day archaeologists are true professionals and use scientific methods when doing archaeology. Students eventually identify Indiana Jones as a fictional character and understand that his exploits are intended to entertain through swashbuckling adventures as opposed to providing an educational documentary on the science of archaeology.

Indiana Jones becomes a favorite class mascot, especially as I provide the authentic theatrical accouterments associated with him. However, the students are carefully guided into discerning the difference between theatrical archaeology and archaeologists, and real-life archaeology and archaeologists. Real adventures in archaeology can now take place without students being "turned off" or confused. I have their interest and, hopefully, their respect.

Figure 1. Michael Turner's middle school classroom.

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Throughout the year I plan much of my curriculum around archaeology and anthropology-related topics and activities. In social studies I have students explore the different cultures presented in their textbooks through an archaeological perspective. When possible I have artifacts or replicas and other related material of the cultures they study. Students also make replicas of their own using a variety of materials such as clay, stone, and plaster. They write about various cultures during creative writing, paint pictures, construct models of a culture's architecture, reconstruct the environment of a given culture, learn some of the spoken and/or written language, study their art and music, create original short stories and plays that reveal how they think a given culture lived and behaved, and participate in many other related activities.

When teaching Georgia history I begin with the ice-age hunters and gatherers that crossed the land bridge that existed between Asia and North America during the last Ice Age. Students develop a picture of what the different environments were like for these Paleo people as they made their way eventually to what is now Georgia by at least 10,000 B.C. I use a variety of filmstrips, video programs, computer software, teacher-made materials and learning games, simulations, and artifacts or replicas to involve students more directly with the concepts being presented. Additionally, I have found that *Frontiers in the Soil: The Archaeology of Georgia,* by Roy S. Dickens, Jr. and James L. McKinley, along with a companion teacher's guide, serve as an excellent text for introducing students to the archaeology of Georgia and the study of archaeology in general.

Eventually students learn that these Paleo hunter-gatherers' environment and thus their life styles and artifacts changed through time. The prehistory of Georgia is traced through all of the recognized cultural periods of Native Americans as students participate in various activities and projects. Finally, I present the cultural exchanges that took place when the first Europeans arrived in North America and eventually in Georgia. Students learn to respect all cultures, even if they do not agree with their ideals. I continue Georgia's history through the present and hypothesize about Georgia's future. All of this is done through archaeology or related components by integrating archaeology within the curriculum.

One activity I use to assist students in understanding their own culture requires them to make a "time capsule" consisting of several artifacts that make up their personal home culture. Students portray future archaeologists several thousand years in the future. They have just uncovered these "time capsules" and their job is to try to piece together the kind of culture that produced the artifacts. Each

child "excavates" and investigates a time capsule other than his or her own to make it more challenging. Students must methodically record all data and then write a report or tell their conclusions about the time capsule's cultural implications. Students eagerly participate in this activity. They often come up with some novel conclusions about twentieth-century North American culture. Following this the class constructs a composite time capsule from a representative collection and buries it for the future.

Another activity that involves students in archaeology is constructing scaled models of Mississippian Period Indian platform or ceremonial mound villages. After students have been introduced to Native American cultures in North America, particularly in Georgia, I have them use their knowledge along with visual aids such as pictures, classroom models, and my classroom archaeology resource and research library to construct their own interpretation of how a Native American Mississippian mound village (ca. A.D. 800-A.D. 1540) may have appeared when occupied or what it looks like now. Students use modeling clay, small sticks, mosses and various other easily obtainable materials to construct their mound villages. Additionally I have students construct scaled maps of their villages, and depending upon the skills of the students, I may have them make topographic maps of the village area. Making the topographic map requires students to utilize a variety of math, geometry, and mapping skills, and provides excellent practical archaeological training with topographic maps. Students learn about the importance of topographic maps to archaeology, both in the discovery and analysis of archaeological sites.

My favorite activity, and most certainly my students', is the class excavation. This activity is the culmination of the year's study of archaeology. I have students prepare for this mock excavation by first learning about the various techniques used in modern archaeology. I also have them prepare artifact replicas of pottery and stone using the same methods available to the given culture, as well as other culturally related organic materials such as animal bones and plant materials. All of these are placed in the intended site months prior to the actual excavation. Naturally, I explain to students that archaeologists do not place artifacts in a site and then excavate them unless they are doing a mock excavation for experimental reasons. By the time this activity takes place students are fully aware of the excavation methods used by modern archaeologists. I have students use the same techniques and most of the same tools that professional archaeologists use during an excavation. I have students use the grid method of preparing and excavating the site. Most of my students would be capable of participating in a real archaeological excavation since I train them in the actual techniques of excavation and data collection currently

used in professional archaeological field work. The excavation takes place over about a two-week period and is videotaped. Following the field work I have students preform all of the required lab work, including cleaning; sorting; classifying; reconstructing; data collecting and analyzing; and finally, publication of their findings on the excavated site. Students learn, as many archaeological field school students have, that archaeology is not an easy job and that some parts of it may be less enjoyable than others. I feel that most of my students develop an appreciation and respect for the true science of archaeology, even if they do not grow up to become professional archaeologists.

This is my ninth year of teaching archaeology at the elementary level. Some students return each year and tell me they still love archaeology because of the activities they participated in while in my fourth grade class. Top on their list of experiences, however, is always the class excavation or, as they fondly refer to it, "the dig". Yes, they still call me by the nickname that I have inevitably acquired, "Indiana Turner", but I know that I have given them something that they will always associate with it besides swashbuckling adventures to exotic places and ancient ruins. Namely, they have acquired a personal involvement in the true science of archaeology and perhaps a lifelong love of and desire to facilitate the science of archaeology. Hopefully, they will pass this along to the next generation of would-be adventurers.

EPILOGUE: THE LAST GREAT ADVENTURE. *Well, adventure calls and I must face a challenge greater than any that an adventurer might have while searching for "lost arks", "temples of doom," or making "lasts crusades". What is this adventure? Perhaps the last great adventure and challenge left for our species: motivating young minds to discover adventures in learning, whether in archaeology or some other discipline. Now, where is that whip?...*

Sifting through a Middle School Archaeology Program

W. Maxwell Duke
Fort Valley Middle School
Fort Valley, GA

In 1988 I started teaching archaeology to an exploratory class at the seventh grade level. Later it became a permanent, major focus in my eighth grade level Georgia Studies classes. State mandated Quality Based Education (QBE) and Quality Core Curriculum (QCC) objectives have been strictly observed in the development of this program. The program has been very successful and is supported by the parents and community.

Justifying the teaching of archaeology in grades kindergarten through twelfth is much easier than excusing its absence. Aside from the bubbling interest which students naturally have for archaeology and Indians, the state curriculum guidelines offer all the justification one needs to develop a strong program. One only has to read the Quality Core Curriculum to see that the study of archaeology is the perfect vehicle with which to traverse the curriculum and tie together the many different subject areas.

The diagram in Figure 2 illustrates how well archaeology can address many QCC objectives in various subject areas simultaneously. This diagram is entitled "Rivers". It illustrates how rivers (which are an important part of the study of archaeology and prehistoric cultures) can be exploited. Diagrams like this can be developed for hundreds of topics. They are extremely helpful and can be used to help plan lessons, incorporate more teachers into the cross curriculum effort, coordinate the use of teaching aides, and visually display what QCC objectives are being addressed and the direction that the unit of study is taking.

The following lesson plan outlines provide examples of the role archaeological study can play in fulfilling the Georgia "State Curriculum Objectives", particularly at the eighth grade level (© 1989, by author). The format is as follows: the Georgia Curriculum Objective is quoted verbatim, followed by the Quality Based Education objective number(s).

1. TOPIC/CONCEPT: Geographic Environment
A. CURRICULUM OBJECTIVE 54 & (QBE 61): "Identifies the

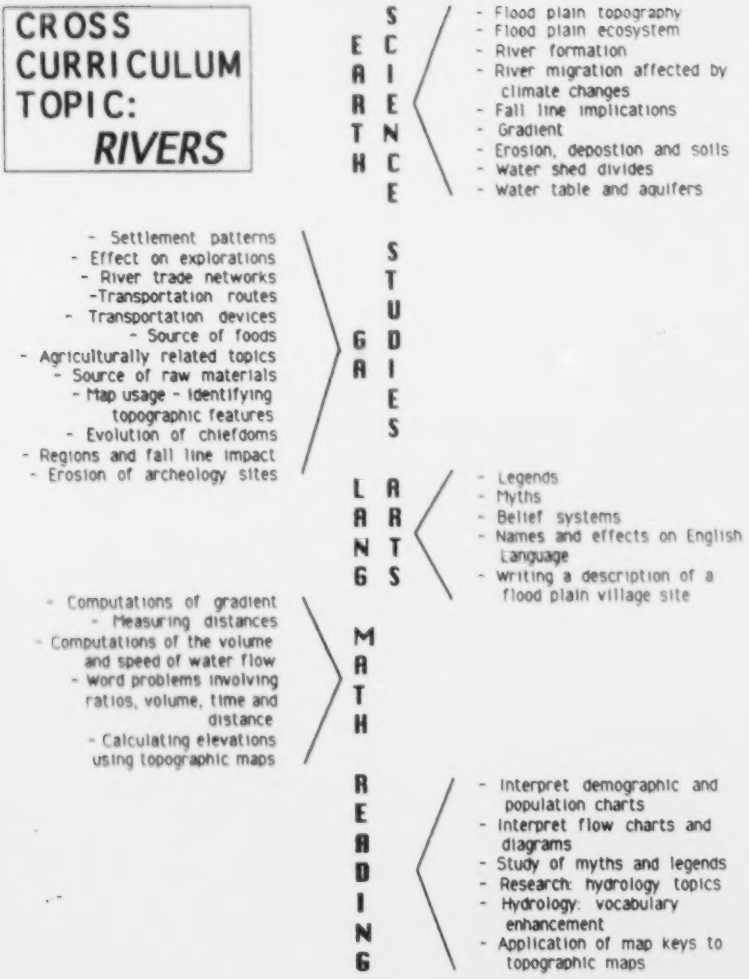
CROSS CURRICULUM TOPIC: RIVERS
EARTH SCIENCE
- Flood plain topography
- Flood plain ecosystem
- River formation
- River migration affected by climate changes
- Fall line implications
- Gradient
- Erosion, depostion and soils
- Water shed divides
- Water table and aquifers
GA STUDIES
- Settlement patterns
- Effect on explorations
- River trade networks
-Transportation routes
- Transportation devices
- Source of foods
- Agriculturally related topics
- Source of raw materials
- Map usage - identifying topographic features
- Evolution of chiefdoms
- Regions and fall line impact
- Erosion of archeology sites
LANG ARTS
- Legends
- Myths
- Belief systems
- Names and effects on English Language
- Writing a description of a flood plain village site
MATH
- Computations of gradient
- Measuring distances
- Computations of the volume and speed of water flow
- Word problems involving ratios, volume, time and distance
- Calculating elevations using topographic maps
READING
- Interpret demographic and population charts
- Interpret flow charts and diagrams
- Study of myths and legends
- Research: hydrology topics
- Hydrology: vocabulary enhancement
- Application of map keys to topographic maps

Figure 2. Topics related to archaeology cover the entire spectrum of state-mandated curriculum objectives. This chart suggests a "theme"approach to connect topics related to Earth Science, Georgia Studies, Language Arts, Math, and Reading.

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location of Georgia in relation to region, nation, continent, hemisphere, and world."

Lesson Title: "Where Did the Indians Come from?"

Summary: To investigate the origin of the Indians of "Georgia", (the area which would someday become Georgia) from Siberia, across the frozen Bering Straits, and eventually southeastwardly to Georgia. The location of Georgia will be emphasized further by examining its position on the globe in reference to other contemporary (and later) civilizations in various other regions of the world — e.g. Maya, Aztec, and Inca Indians of South America; Egyptians on the continent of Africa; Chinese in Asia; and the various civilizations of Europe and the Mediterranean in general. A modern map of Georgia will be used to show several locations where the *first* Georgian (Paleo-Indian) sites are located. Similar sites will be located throughout the United States to assist in the development of map skills.

Method: Lecture, discussion, examination of charts, maps, and globes

Sources: *Southeastern Indians* by Charles Hudson, *Where Did the Indians Come from?* by Maxwell Duke, *Frontiers in the Soil* by Roy S. Dickens, Jr., and James L. McKinley, *Exploring Alabama through Archaeology* by C.A. Wimberly, *Ocmulgee National Monument* by G.D. Pop, and *Sun Circles and Human Hands* by Emma Fundaburk.

B. CURRICULUM OBJECTIVE 54 & (QBE 61): "Locates and describes the geographic regions of Georgia (mountains, piedmont, coastal plain, etc.)."

Lesson Title: "The Geographic Regions of Georgia"

Summary: The various regions of Georgia will be located on a map. Particular emphasis will be made upon the mountains, piedmont, coastal plain and the Fall Line. These regions will not simply be located, but they will also be described in view of their prehistoric importance as to how each provided different resources. Modern day landmarks and prehistoric landmarks will be labeled on the map for orientation purposes.

Method: A large Georgia map will be used to outline the geographic regions of Georgia. Each student will produce a map outlining

these areas and will label them according to major cities, rivers, land forms, and vegetation defining the various regions and Fall Line.

Sources: *Frontiers in the Soil* by Roy S. Dickens, Jr., and James L. McKinley, *Mississippian Occupation on the Middle Flint River* by John E. Worth, *Our Flint River: A Geography Lesson* by Maxwell Duke, and *Atlas of Georgia* by Thomas W. Hodler and Howard A. Schretter.

Other curriculum objectives easily served by the discipline of archaeology include: "identifying important geographical features of Georgia (e.g., Fall Line, Okeefenokee Swamp, Appalachian Mountains, etc.)" (54); "explaining that ocean and wind currents affected the exploration and settlement of Georgia and the Southeast" (54, 61); "identifying geographical factors (e.g. location, climate, mountains, rivers, soil and natural resources) and explaining how they have influenced Georgia's exploration, settlement and economic development" (50, 53, 54, 61); "identifying and describing Georgia's prehistoric Indian civilizations" (57); "analyzing sentiment in Georgia as compared with other southern states for secession from the Union" (57); "analyzing Georgia's role in the Civil War and the impact of that war on the state and relating it to events in other states" (57); "identifying well-known and influential Georgians from Independence through Reconstruction (e.g., men, women, minorities)" (57); and "examining the variety of legal and extralegal strategies in Georgia to enforce political, social and economic segregation of the races" (53, 57). Many other curriculum objectives not listed above can be illustrated effectively and interestingly within the realm of archaeological study. (An entire set of daily lesson plans, with emphasis on archaeological content, designed to meet the QCC and QBE objectives are being compiled by the author for use by middle and high school teachers. See the curriculum materials, Chapter III, below.)

Other curriculum projects can be created utilizing an archaeological approach. I have been designing short field trips which can be accomplished during normal school hours. Field trips, however, are justified only if the students receive preliminary information and know something about the places to which they will be visiting *before* they get there. Requiring students to conduct research or meet other specified qualifications so as to "earn a ticket" to go on the trip is a tremendously effective motivator. There are many parks and museums with interpretive material, guides, and displays. (See "Georgia Museums" in Chapter III for a listing of museums throughout the state.)

The trips I design include a "fact and fun" sheet prepared for each subject area. The appropriate teacher is responsible for presenting lesson plans adapted to the trip, as in the following example. The earth science teachers present a unit on soil, erosion, alluvial flooding, renewable resources, minerals, carbon 14 dating techniques, and topography; the math teachers present a unit of study related to archaeology on computing "half lives", spatial distances, metric measurements, percentages, averages, and simple geometry which relate to what will be examined on the field trip; the Georgia studies teachers present a unit of study on prehistoric Indian cultures, stratigraphic cultural deposits, artifacts, time line techniques, and environmental adaptations appropriate to the area under investigation; the language arts teacher has the students write an account of the trip and any activities in which they participated; and the reading teachers present a unit on making charts, diagrams, and the use of such materials in analyzing data obtained on the field trip.

Another popular activity is the Food Festival. It can involve the entire school or certain grade levels, and can be an excellent way of introducing the study of Indians and archaeology. Teachers and parents, using reliable recipes, have prepared numerous "authentic" Indian foods for the students to sample. With displays of pumpkins, beans, corn, poke salad stalks, crawfish, mussels, oysters, and other "exotic" foods, the program is conducted with a festive atmosphere. However, it is also a learning event. The tasting party is preceded with studies related to QCC objectives covering food groups, human dietary needs, climate, agronomy, soil characteristics and other geographic conditions as related to food and crop production, archaeological techniques used in determining the diets of prehistoric Indians, contributions of the Indians to the modern American diet, contributions of the Indians to the English language through crops and food, and blending of African and Indian culinary techniques. It includes the origin and development of agriculture in Georgia, identifying and studying various cultigens indigenous to Georgia, effects of river flooding, erosion, and topography, and many other topics which cross all curriculum areas of math, language, science, and social studies. Many of these topics require the students to conduct research in the library and study and examine archaeological remains such as charred bone, nuts, shell, and pottery sherds.

In preparation for the eighth grade Food Festival, eight teachers prepared two Indian foods each. Recipes were obtained from various documented sources (see "Southeastern Indian Cooking" and "Food Preservation", Chapter II, for recipe suggestions), and very few modern substitutions were allowed (for

example, bacon grease was used instead of bear grease). Some of the foods served inside the building were poke salad, squash, fried ramps, beans, venison succotash, persimmon bread, sofkee, cold grits, crawfish, and "pones" of corn bread.

Outside activities included the tasting of various wild animal foods. A barbecue pit was set up and all 220 students were allowed to pass by and sample deer, squirrel, rabbit, and raccoon. The students arrived in groups and listened to a presentation on topics related to the foods which they were about to taste. The inside and outside event lasts almost all day.

The festivities were a joint effort. The teachers financed the cost of preparation. The students (with parental assistance required) obtained and donated most of the meat. Parents donated the firewood. One teacher's husband did the barbecuing. Students acted as servers and instructors. Everyone cleaned up the mess.

The students' interest and participation goes beyond the classroom into the field (Figure 3). Weekend and summer field trips which are funded by the Peach County Historical Society (supervised by professional archaeologists) and conducted by Flint River Excursions offer the students an opportunity to have first-hand experience in archaeological field work. Some of these projects have resulted in the discovery of previously unknown sites, the preparation and submission of official site forms to the state site files for these sites, the location and mapping of endangered sites, and the test excavating (under professional supervision) and report writing for some sites. An excellent example of publication potential appeared in *Early Georgia* Vol. 19, No. 1 (1991).

The weekend and summer field trips are offered to students who have demonstrated interest and want to volunteer for service. Such offers have had a tremendous impact on motivation. Along with the academic portion of the program, it is this type of exposure that really makes a difference. (Recently one of my students, a fifteen-year old, was selected to be a member of a foreign exchange program to work on an archaeological site in the Ural Mountains of the Soviet Union. He was selected because of his middle school exposure to archaeology!)

Fieldwork by students is a culmination of year-long research projects which involve small groups of students who work independently of the general class. The members of the group change as topics related to archaeological techniques are completed by each group. All topics and projects are designed to prepare them for off-campus field trips. All students do not receive the same instruction. Some are trained for specific tasks that they will carry out on field trips.

Many curriculum topics are covered and heavy emphasis is

Figure 3. Archaeological mapping puts mathematical skills to work.

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placed on the development of personal responsibility, caring for materials from archaeological expeditions, and the importance of record keeping. Much attention is given to the appreciation of archaeological sites and the need to preserve them, and their integrity. Basic scientific methods are repeatedly stressed, along with the need for observation, organization, and note taking.

A strong emphasis is placed on mapping. Students learn not only to use different types of maps but they also learn techniques of making maps—especially contour maps like those used and prepared by archaeological teams. An example of such a map appears in *Early Georgia* Vol. 19, No. 1 (1991). It was done by seventh and eighth grade students—completely! They used the transits, recorded the data, plotted the radial, drew the map, photographically duplicated their drawings, and using graphic lettering did the labeling by hand. Several teams of students worked over a lengthy period of time under the supervision of several professional archaeologists, knowledgeable parents, and other trained adults.

Archaeological field excursions should be approached with caution. Obtain the services of an archaeologist. (You might want to contact a university Anthropology department and inquire about the availability of a anthropology student working on an advanced degree who wants to use volunteer labor. I did, and it was the best thing I ever did!)

Limit your professionally supervised project to something simple but worthwhile. A good start would be to have students canvass an area and make inquiries of land owners to locate previously unreported sites (see "Collecting Artifacts from the Surface", the next section in this chapter). Then execute a controlled surface examination. (If you are unfamiliar with controlled surface survey, mapping techniques, and site reporting, do not attempt these activities without professional guidance.)

Emphasize the value of record keeping and the preservation of sites. Discourage unsupervised operations. Do not undertake any digging or other excavations unless you have professional archaeological backing. Limit your field excursions to previously unreported sites or to sites which are in danger of destruction.

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Collecting Artifacts from the Surface

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Archaeologists do not recommend digging on an archaeological site as a classroom exercise. Excavation is a technical procedure, and the digging and laboratory work require a surprising amount of time and disciplined, tedious labor.

But with the right preparation, teachers and their students can learn a lot from studying real landscapes and the artifacts they fins right on the surface of the ground. In the process teachers and students can make solid contributions to knowledge and to the conservation of Georgia's past.

Traditionally, the history of Georgia that has been taught in the elementary and high schools of our state is one that begins with James Oglethorpe and colonial settlement. Recently, however, ethnohistorians and archaeologists have enriched our understanding of Georgia history by extending it back to the arrival of missionaries, early explorers like Hernando de Soto, and the native peoples they contacted.

Although the addition of the sixteenth century to our state's history is an impressive accomplishment, it only scratches the surface of Georgia's past. Plowed fields, eroding hilltops, and construction sites reveal fragments of pottery and stone tools, evidence of over 10,000 years of human occupation that is too often neglected by our educational system. Archaeologists seek to record the existence of all of these artifact scatters, or sites.

Unfortunately, commercial development destroys sites before they can be excavated, or even identified, by professional archaeologists. Teachers can provide a valuable service for professionals, while at the same time bringing their history lessons to life, by finding and recording archaeological sites with their students. Finding artifacts makes the past tangible and real for students, and if teachers and students practice a few rules for good archaeology, they can record site information in a way that makes it accessible to others for generations to come.

Making a good contribution through surface archaeology is not difficult. You follow two simple maxims: record *what* you find and record *where* you find it. Help is always available for figuring out what you have, from knowledgeable professionals and amateurs, and from some of the sources in Chapter IV. Recording

where you found it only requires being able to locate yourself on a U.S.G.S. 1:24000 topographic map.

Surface Collecting in Georgia: A Guide for Avocational Archaeologist, by Dan Simpkins, is a practical guide for anyone interested in properly recording archaeological sites. It is available from the Department of Sociology and Anthropology, West Georgia College, Carrollton. This instructional booklet begins with a chapter of background information entitled, "What is an Archaeological Site?" Here, Simpkins discusses some of the terms archaeologists use. Any evidence of past occupation, from a single projectile point on the surface to an old chimney from an historic era house, can be considered a site. The next section is the self-explanatory "Methods of Collecting and Recording Site Information". The final chapter is about "Cataloguing, Curating, and Communicating", and has a useful glossary of archaeological terms. The booklet explains basic techniques, record keeping, how to take notes, tools, mapping, and cataloguing. Artifacts can be photographed, video-taped, and sometimes even photocopied. Legally artifacts belong to the land owner.

The pamphlet describes how to fill out Georgia's simple Archaeological Site Form, so students can register their sites officially. Copies of the front and back of the site form are reproduced here on the next two pages (Figures 4,5). For full-size copies, write to the Georgia State Site Files, Department of Anthropology, University of Georgia, Athens, GA 30602. These forms are straightforward and easy to use. Perhaps the most important part is identifying the site location on a topographic map. Teachers can use this as an opportunity to teach their students basic mapping skills, which can also be practiced in the field by using a compass to produce a sketch map that shows the site relative to landmarks.

Overall, *Surface Collecting in Georgia* provides a solid introduction to good techniques for collecting artifacts and recording the nature and location of sites. The guide is aimed at the serious amateur, however, and contains several discussions that teachers need not be concerned with unless they become more interested in archaeological theory. Teachers can focus on the latter sections of the booklet (the discussions of methods and cataloguing), rather than the more theoretical segments.

With a little imagination, and the guidance of *Surface Collecting in Georgia*, teachers will be able to practice archaeology in a way that benefits both their students and professional archaeologists by helping to fill in the gaps in the history of our state.

GEORGIA ARCHAEOLOGICAL SITE FORM
1990
Official Site Number:_____

Institutional Site Number:_____ Site Name:_____
County:_____ Map Name:_____ USGS or USNOAA
UTM Zone:_____ UTM East:_____ UTM North:_____
Owner:_____ Address:_____
Site Length:_____ meters Width:_____ meters Elevation: + - _____ meters
Orientation: 1. N-S 2. E-W 3. NE-SW 4. NW-SE 5. Round 6. Unknown
Kind of Investigation: 1. Survey 2. Testing 3. Excavation 4. Documentary
5. Hearsay 6. Unknown 7. Amateur
Standing Architecture: 1. Present 2. Absent
Site Nature: 1. Plowzone 2. Subsurface 3. Both 4. Only Surface Known
5. Unknown 6. Underwater
Midden: 1. Present 2. Absent 3. Unknown Features: 1. Present 2. Absent 3. Unknown
Percent Disturbance: 1. None 2. Greater than 50 3. Less than 50 4. Unknown
Type of Site (Mill, Mound, Quarry, Lithic Scatter, etc.):_____
_____
Topography (Ridge, Terrace, etc.):_____
_____
Current Vegetation (Woods, Pasture, etc.):_____
_____
Additional Information:_____
_____
_____
_____

SKETCH MAP (Include sites, roads, streams, landmarks)	OFFICIAL MAP (Xerox of proper map)

Figure 4. Georgia Archaeological Site Form, front.

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State Site Number:_____ Institutional Site Number:_____

Public Status: 1. National Historic Landmark 2. National Natural Landmark
3. Georgia Register 4. Georgia Historic Trust 5. HABS 6. HAER

National Register Standing: 1. Determined Eligible 2. Recommended Ineligible
3. Recommended Eligible 4. Nominated 5. Listed 6. Unknown 7. Removed

National Register Level of Significance: 1. Local 2. State 3. National

Preservation State (Select up to Two): 1. Undisturbed 2. Cultivated 3. Eroded
4. Submerged 5. Lake Flooded 6. Vandalized 7. Destroyed 8. Redeposited
9. Graded 10. Razed

Preservation Prospects: 1. Safe 2. Endangered by: _____
3. Unknown

RECORD OF INVESTIGATIONS

Supervisor:_____ Affiliation:_____ Date:_____
Report Title:_____
_____
_____
Other Reports:_____
_____
Artifacts Collected:_____
_____
_____
_____
Location of Collections:_____
Location of Field Notes:_____
Private Collections:_____
_____
_____
_____
Name:_____ Address:_____

CULTURAL AFFINITY

Cultural Periods:_____
_____
_____
Phases:_____
_____
_____

FORM PREPARATION AND REVISION

Date	Name	Institutional Affiliation
_____	_____	_____
_____	_____	_____
_____	_____	_____

Figure 5. Georgia Archaeological Site Form, back.

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Archaeology and Anthropology for Second and Third Graders

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This unit of study is the highlight of the year for the second and third graders in my class. We have several objectives in mind when beginning the unit: to increase students' awareness and appreciation of other cultures, to develop their understanding of the similarities and differences among various peoples, to encourage students' interest in history, to help them develop skills in scientific inquiry, to introduce and reinforce research skills, and to have fun!

When I tell my students that we are going to study other cultures, both past and present, they are excited. When I ask them what that means they really do not know, so I ask them to look up the word "culture" in the dictionary. We go through the definitions until we agree on the one that fits our subject. After brainstorming a list of attributes of a culture, students use dictionaries to complete a worksheet, answering questions such as: "What does an archaeologist do?", "What is an artifact?", "What is culture?", "Do we have a culture?", and "What kinds of thing have to do with our culture?". We spend as much time as needed to discuss the children's answers, making sure that everyone understands the important concepts. The worksheets are not completed for a grade, but to help students practice researching material in reference books and putting the information into their own words.

Following the introduction of a few archaeological terms and the discussion of culture, we spend some time examining culture boxes from several countries. These boxes are available from our district media center, but similar resources could be amassed by the teacher. We have boxes from Mexico, Iran, Pakistan, Turkey, Alaska, and Yugoslavia. The most valuable items in the boxes are the artifacts from the various countries. In addition to everday articles, the boxes include samples of money, stamps, a flag, some clothing, and other materials such as magazines, newspapers, large photographs, and cassette-tape recordings. While these boxes are old and very "used", they are nonetheless very exciting to the students.

Our next activity involves the use of a time line and some

rudimentary research. I attach a long piece of paper above the chalkboard, and divide it into segments. Some of the students are familiar with the concept of B.C. and A.D. in referring to dates, while others know nothing about it. I label the segments on the paper in 500-year intervals and show the students how the dates fall into the A.D. period or the B.C. period. We practice determining where certain dates would be placed on the time line (the location for the date Columbus came to the New World, for example). We also discuss the meaning of the date abbreviations and why I have allowed more room for B.C. than A.D. years. Then I begin a list of ancient cultures on the board, starting with ancient Egypt and ancient Greece, and let the students think of as many as they can. If they have not brainstormed a list long enough for each student to have a culture to research, I will attempt to add to the list. We often include various Native American cultures as well as the Aztec, Maya, and others. Of course, some ancient topics are easier to research than others, and some students need more assistance to find information, but it all works. We make a short list of the important areas we need to learn about in each culture, and I make copies of this list on a worksheet on which the students can take notes. Our topics usually include information such as the date range and location of the culture, what the people wore, what kind of food they grew and ate, and their religion, art, dance, music, and education.

Before going to the library, we talk about looking up topics in the encyclopedia. These are the main points I stress: 1) information is located under various title words (agriculture for food), 2) look for topic words, and 3) write down important facts, not the entire text. Everyone competes for the volumes of the encyclopedia that he/she wants, and fortunately, we have several sets in our library. I and the media specialist help students use the card catalog to locate other books if they need help. This sounds easy, but many students have little experience trying to find information that is not handed to them. There is some frustration at first, but soon all the students have at least one fact in each area within their study culture. They take turns sharing the culture information with the class. We also write in the dates of the culture on our time line.

We examine a worksheet explaining terms such as "strata" and "stratigraphy", and "organic" and "inorganic" artifacts. Students use dictionaries to research the terms, which are then discussed. They discuss a hypothetical excavation and explain what types of artifacts listed on the worksheet would have survived one hundred years later. There are no wrong answers to these questions, but students are asked to explain their reasoning.

Our next activity is the "artifact find". I make up a collection of

artifacts from around the house, label them with numbers, and put them in a ziplock bag. A group of two or three students will work on a bag, and there are 10 to 12 items in each bag. The items include objects that most children recognize (rubber band, nail) and several that most do not (carpet caster for furniture legs, old stocking fastener from garter belt). They try to determine what the item is, or its function. They are encouraged to share with other groups (some have similar items) as scientists would share information. We have a great time going over our results. Some of the kids' ideas for artifact functions are much more interesting than the actual use! They cannot wait until I tell them what some of the objects actually are. I explain that archaeologists sometimes are unable to discover the function of some artifacts.

We next study another worksheet that simulates the strata of an imaginary site. This worksheet involves logic and mathematics skills, particularly in the sections requiring students to calculate the time periods of each stratigraphic level within the site, determine which artifacts (illustrated with dates) belong to which strata, and discover the location of the site on the classroom time line. This worksheet reinforces some of the terms and concepts previously introduced, especially the concept that older artifacts are usually found in the deeper stratigraphic levels.

A number of good filmstrips are available about ancient cultures for use at this point. We watched and discussed several, including ones on ancient Greece, Rome, Egypt, and some on ancient North American cultures. The National Geographic filmstrips are well-done. (See Bibliographic Sources, Chapter III, for listings of films and videos.)

The final worksheet brings in some new terms to look up, most of which cannot be found easily in the dictionary without "digging", or without some assistance from the teacher. Students research terms such as *dig, catalog, date, stratigraphic, relative date, absolute date, carbon-14 dating, pottery dating, and written history.* They learn the steps involved in recording a find, which becomes a lead-in for the following dig experience. I salt some items in layers of different color sand. We use screens to sift for the artifacts, and label and organize them. Students then draw their conclusions about the findings.

It is at this time that we choose a culture for in-depth research. We look at the cultures researched by the students earlier and choose from one of those. We also talk about what special resources we have for any of the cultures. This year one class chose Japan, another chose Australia, and yet another chose Greece. We return to our list of attributes of a culture and students choose (or are assigned) different areas to research. One student might have food, farming and customs, while another might have

government, history and legends. We begin by looking for information about ancient times, but later add material about the modern culture. Students begin with the encyclopedia, but move on to other sources of information, including films, visitors, recordings, and anything else anyone can locate.

We decided to create our own culture boxes based on the ones we explored earlier. Each student is responsible for developing a report on his/her subject. We reviewed some of the following steps in working on reports: 1) find information on your topic (use table of contents, index, etc.), 2) read the information, 3) pick out the important facts, 4) take notes, but do not copy everything (we practice some note-taking skills at this point), and 5) develop a report using your notes. After the students have completed their reports (which can be a lengthy process) they develop a teaching activity to go with their reports. This might be a word-find, a crossword puzzle, a map with fill-in-the-blanks, etc.

The most fun part of this study for the students seems to be creating items for the culture box. Some of the items made include a house, an item of clothing, a map, a time line, some artwork, a dictionary of words in the native language, etc. Students also enjoy creating and eating a meal based on the foods of the culture under study.

The final activity of our unit is creating our own culture of the future. We again look at our culture attributes list to make sure we include all the important aspects of a culture. We decide on a date far in the future, in order to let the students be very creative. Students work in groups to create schools, government, art, music, transportation, recreation, religion, etc., of their new culture. Of course, this study brings up many opportunities to discuss future technology, and how people are dependent on the materials available. The students draw pictures to illustrate their ideas. As a finishing touch, we pretend to be archaeologists in our future culture. We examine items from our current culture and brainstorm what these future people might think about them.

Indians, Archaeology of Georgia, and Middle School Students

Carol Brown and Carol Buhler
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Utilizing archaeological information and techniques in an eighth grade Georgia History class provided a new way to begin the school term. In the current texts, such as *Panorama of Georgia*, one finds perhaps two pages concerning the prehistory of Georgia with references to the "Woodland Tradition", etc., and absolutely nothing to make this unwritten period of North America's past come alive.

We live in an archaeologically significant area of the state. The mounds that were in the Oconee district are just east of us, the Hightower Trail runs through the north end of Rockdale County, and we are constantly hearing of residents finding projectile points. This richness enabled us to interest the students in learning more than the textbook offered concerning the prehistory of our area.

Our unit, "Indians and Archaeology of Georgia" consisted of twenty class days of activities, lectures, demonstrations, and media presentations. During our study at the LAMAR Institute/University of Georgia Teachers' Workshop (see Chapter III for details) in the summer of 1988, slides were prepared of the archaeology facilities at the University, of sites we visited, and of examples of the various geographic regions of Georgia. A video tape of the "dig" we participated in gave our students a first-hand look at what real archaeology is about, instead of a typical Hollywood movie version.

Several of our activities were suggested by the group of teachers who studied with us that summer and are not original. We included the identification of common, modern-day artifacts, uncommon historic artifacts, making Cherokee-style pinch pots, learning to finger weave, making a stratigraphy box to excavate, and listening to traditional Cherokee Indian legends and myths (see Chapter II for several of these activities).

Probably the most interesting of the activities, which gave the students a real idea of how difficult it might be infer the age, function, and origins of artifacts, was our "Uncommon Artifact" lesson. We collected from various sources items that were used

before the turn of the century which students today might not have first-hand experience with, and household items that were unusual, or whose function was not evident. These thirty to thirty-five "artifacts" were numbered. The students gathered into groups of three, were handed three or four artifacts to identify, and asked to tell what it was, how old it was, and to discuss the technologically of the people who made it. A time limit was set at two minutes. A bell signaled the time to exchange artifacts with a neighboring group. This process continued until everyone had the opportunity to examine all the artifacts.

The following day, we went over what each artifact was, first soliciting suggestions (which often were hilarious), then we provided as much information on the item as we knew. Items that were really good to include were a froe, cotton scales, a plumb-bob, a strawberry huller, a foot to an old sewing machine, a brass coffin screw, a razor strop, and a World War II cigarette case.

In addition to historic artifacts, we also studied prehistoric stone tools in the collections of students and their families. We made every effort to date these by shape and workmanship. We also used this time to encourage the students to practice responsible archaeology by recording their finds, taking photos, and filing the information properly. We urged them to leave the sites undisturbed.

This school term, we had the opportunity to share this unit with our interdisciplinary classes of sixth, seventh, and eighth graders. The groups were with us for four weeks, but for only thirty minutes per day. Since we had a mixed level class and a non-graded situation, we found it necessary to edit our previous unit. We deleted all outside readings, relying on the lectures, slides, and video tape to help with background information. Another change we made was to create more "hands-on" activities, many of which were adaptations of the lessons as written in the unit. Even though most people detest the use of "dittoes" we included an archaeology word search that the kids loved.

Videos used in this unit included *Oconee: Valley of the Chiefs* and a personal tape of the archaeological site we visited. This year we included two videos which were not available in 1988, *Tragedy to Triumph*, a short history of the Cherokee Indians, and *Voices in the Wind*, from the Georgia Council for the Humanities. The latter dramatizes Cherokee legends about an entire village that disappears into the mountain to live with the spirits at the end of the Mississippian cultural period.

Interdisciplinary aspects of this unit included a connection to metric measurements, and ratio and proportions in the making of a time line representing the time from 12,000 B.C. to the present. Also included was earth science in our discussions of the physical

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regions of Georgia and rock types used to make projectile points. The arts were included in the pottery making and fingerweaving. Language arts and social studies were utilized throughout all aspects of the unit, particularly through writing assignments based on the various topics studied. This type of unit is most applicable in the Georgia History classes which are taught at the eighth grade level. This unit is easily workable, however, in any middle school classroom.

Dig It!: A Children's Summer Workshop in Archaeology

Julie Barnes Smith
Mobile, AL

Dig It! was first held in the summer of 1988 at Emory University, Atlanta, and was designed as a workshop for children ages eight through twelve. Directed by Dr. Pamela Russell and Julie Barnes Smith, it was an intensive introduction to archaeology throughout the world. The workshop was conducted one afternoon a week for five weeks. (Emory University continues to offer an evolving series of annual summer archaeology workshops for children. Currently, various workshops are offered to participants ranging in age from five to eighteen years old.)

Activities of the 1988 workshop were designed to familiarize the participants with many aspects of archaeology, both Old World and New World. Also specific areas were studied, including Egypt, Rome, Greece, and the southeastern United States. Activities included forming a human time line and conducting exercises in ancient writing. Also, the children simulated the ritual surrounding Egyptian mummification. Another activity involved accessioning and preparing archeological material for an exhibit. An archaeological project was simulated including excavation, recording, analysis, and reporting. The final activity was a field trip to an archaeological site.

The human time line was designed to show the relationship of events happening throughout the world over time. The times were converted to "years ago" using the year 2000 as the present. The following table shows some of the events included:

Years Ago	*Event*
2.5 million	Earliest stone tools
15,000-25,000	Conditions favorable for people to cross into New World
10,000	Earliest walls and towers of Jericho were built
10,000	Extinction of Big Game in the New World
9,000-11,000	Domestication of barley, wheat, goats, sheep, and pigs in Old World
8,000	Domestication of plants in the New World
4,000	Earliest known pottery in the New World

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4,000	Bronze age begins in Europe
2,100	Earliest writing in New World in Mesoamerica
2,079	Vesuvius buries Pompeii and Herculaneum
700-1,100	Anasazi build huge, multiroom pueblos in the New World
905	Pope Urban II launches the first crusade

The time line was set up using the divisions in a sidewalk as time markers. Each section represented 1,000 years. Each participant picked an event out of a hat and illustrated what they though might have happened. They then took their place in time. Students representing Old and New World events were able to talk about what was happening in both places. Finally, the leaders, beginning in the present, traveled back through time picking up each representative and discussing each event. A discussion was held afterwa d about time, people, and how diverse the world is.

Another activity simulated an archaeological project. This activity allowed the kids to do archaeology without having an actual site to dig and without the lengthy time frame involved in doing an actual project.

A small box was used to represent an archaeological excavation unit (see "Excavation Unit", Chapter II). This box had a window through which you could observe stratigraphy being created. During a talk about how Native Americans came to live in the New World, soil and actual artifacts were deposited in the box in chronological sequence. After arriving in the present and discussing how archaeologists locate and research sites, the excavation began. Groups of four to five children made up four excavation teams (Figure 6). Each team had two excavators, one mapper and recorder, and two screeners. Each individual had a turn at each task. Levels were measured, artifacts found *in situ* were mapped, and notes were taken about the soils and what was found. Everything about the excavation was treated as though it was an actual site.

Following completion of each level, the "data" were taken to the laboratory for analysis. Identification sheets, keyed to the artifacts, told what each item was and when it was used. These were then listed on an analysis sheet and the appropriate time period checked. The analysis sheet identified when each artifact was used. After the cultural period for each group's stratum was determined, participants discussed their particular period to discover how the people during that time utilized the artifacts recovered. Findings were presented to the entire group and discussed.

Many people discourage the use of a site simulation in teaching archaeology to children. It is thought that it puts too much stress on

Figure 6. Activities at a Dig It! workshop.

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digging. Site preservation and the importance of digging only by professionals, or with professional supervision, should be emphasized. The importance of digging only when a site is threatened and of digging only limited portions of a site were discussed. This activity was important because it showed, without disturbing an actual site, how complex and time consuming an archaeological project is.

Another Dig It! activity relayed the importance of presenting research results and making material available to the public. This activity also emphasized the museum aspect of the workshop. The artifacts, notes, and documentation from a mythical site found near Pompeii called, "Digitemori" were shipped to the museum. The participants were divided into groups and each was given a specific task to prepare for a major exhibition and opening. One group registered the data into the museum's collection and made sure all of the material arrived safely. Other groups prepared exhibits using site descriptions, excavation notes and drawings, and the recovered artifacts. This preparation included text and graphics, and emphasized the importance of context and proper excavation. A group prepared a brochure about the site and the exhibition, while another group planned and "catered" the opening. The exhibit was installed in part of the Emory University Museum of Art and Archaeology. Parents attended the opening and viewed the exhibit.

Dig It! was a successful workshop experience and the participants gained a great deal from the five days. Especially important was a sense of the past and what material remains can tell us about the people who used them. Most importantly, the children learned what archaeology is not. As one participant stated in an *Atlanta Journal-Constitution* article, "Most people think it's like Indiana Jones, but it's not like that. There's not much money in it, but if you like it, it's something you might want to do." For children, whose idea of archaeology is that of a glamourous, adventure-filled life, Dig It! lets them experience many aspects of archeology, but also lets them experience the past.

ACKNOWLEDGMENTS

Thanks to Dr. Pamela Russell for giving me the opportunity to work with her in planning and teaching the first Dig It! workshop in 1988. Thanks also to Michele Griffin at the Michael C. Carlos Museum at Emory University for giving me permission to discuss Dig It! and to use the workshop's name.

The National Science Foundation Young Scholars Program in Archaeology at Old Mobile

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The National Science Foundation Young Scholars Program in Archaeology at Old Mobile was designed to acquaint high school students with the scientific aspects of modern archaeology. Fifteen students (juniors and seniors) from three states underwent an intensive four-week program of fieldwork, classroom lecture, and laboratory. Students were selected on the basis of essays and letters of recommendation from their high school science teachers. Each student participated in a research project of their choice in order to gain firsthand research experience. In addition, several field trips were made to visit other facilities, in order to give a rounded picture of the discipline of archaeology.

Much of the program revolved around actual excavations at the site of Old Mobile (1702-1711), one of the first French settlements in the present southern United States and the capital of French Louisiana. Students worked closely with two Ph.D archaeologists and four other professional staff members in the excavation of a French house. In addition to the archaeological staff, two high school teachers served as counselors, while numerous other specialists served as guest lecturers.

In the field, students were taught archaeological survey methods for the location of sites and features (Figure 7). They were also taught excavation methods, including actual excavation with hand tools, mapping of finds, use of the transit to take elevations, and artifact recovery methods. While students experienced the thrill of finding archaeological remains, they were taught the importance of recording the provenience of each find so that more complete interpretations of past activities could be made.

In the laboratory, the students learned that archaeology is not just finding interesting objects. The finds must be washed, sorted, identified, conserved, analyzed; and reports written. Students spent several partial days gaining firsthand experience in laboratory work

Figure 7. Students excavating at the Old Mobile site.

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ranging from sorting fine-screen materials to identifying ceramics. Lectures given in the laboratory setting included techniques of pipestem dating and the evolution of European ceramics.

A third component of the program was classroom lectures on the background of Old Mobile, colonial architecture of the Gulf Coast, archaeological method and theory, pottery manufacturing, analysis of animal bones from archaeological sites, pollen analysis, and glass bead analysis were presented. Perhaps the most exciting lectures and subsequent discussion dealt with ethics. Such topics as "who owns evidence of the past," "problems with using human subjects in research," and "concerns of dealing with human remains--scientific knowledge vs. the beliefs of groups and individuals" elicited lively discussion among the students as various viewpoints were explored. Some students had actively collected archaeological remains in the past, or have relatives or friends who do. Our discussion forced them to realize the destruction of the record of the past that occurs when uncontrolled digging takes place. We hope that we have instilled a conservation ethic in them.

Following a classroom lecture on Indian ceramics, the students were treated to an actual demonstration of the forming and firing of pottery using aboriginal techniques. Several students wanted to experiment with pottery manufacture for their projects—an example of replication experiments which help understand past activities. A lecture on architecture of the Gulf Coast was followed by a field trip to view a standing, eighteenth-century French house. Several of the students chose to construct a partial building in the French style to test the durability of different construction techniques and materials. Students were taken to visit a prehistoric shell midden site, to the Alabama Department of Archives and History to see how artifacts are curated and displayed, and to an excavation of an eighteenth-century Creek Indian village for a different look at field archaeology. One of the most interesting field trips was a visit to the Stennis Space Center in Mississippi, where students were taught how aerial photographs, satellite images, and other techniques of remote sensing help archaeologists interpret the past. The high-tech activities at Stennis contrasted with the students' hand excavation experience, and gave them a better appreciation of the breadth of modern archaeology. Optional weekend field trips included visiting a living history reenactment of eighteenth-century French Marines and visiting archaeological sites and museums.

Students were required to construct research projects during the program. Four weeks is hardly enough time to formulate and complete a research project, but several of the students made real contributions to the long-range research goals at Old Mobile. We anticipated that students might want to develop their research into

science fair projects, and we viewed the four-week projects as pilot studies, yielding research proposals as the end project when it was clearly impossible to complete the project.

One of the requirements of the N.S.F. program is that follow-up activities be scheduled. We plan to maintain contact with the students and high school teacher counselors. We want to see how many students pursue their projects and enter the local science fair or academy of science meeting, and how they fare. An evaluation study of the project based on questionaires given to the students on the first and last days should allow a measure of the success of the program in changing knowledge and attitudes of the students towards archaeology in particular and science in general.

Student response was enthusiastically positive. All said that they would recommend this project to others, and that they enjoyed the opportunity to learn by gaining firsthand experience with a scientific discipline. Although we eventually received forty applications for the fifteen available positions, we felt that we could have done better. Although we made a concerted effort to recruit Native Americans from the Mississippi Choctaw, the MOWA Choctaw, and the Poarch Band of Creeks, we didn't attract applicants, despite written and telephone communications. We received no Black applicants, but we accepted one Hispanic student. We feel that direct visitation of schools might produce better results next year. We had no shortage of qualified female applicants; indeed, our problem seems to be to attract males.

Some of our colleagues might question the use of high school students. We found, contrary to those expectations, that the students selected for the program were excellent workers and inquiring students. They often excelled our college students in their desire to learn, and in doing diligent fieldwork. Although June and July are not the best time to do archaeology in the Mobile area due to high heat, humidity, and insect pests, the students took it all in stride. We would highly recommend the use of gifted high school students for any project. They have that thirst for knowledge that makes them a pleasure to teach, and yet they do not think that they know it all and are, therefore, willing to follow directions. We have found that seniors are preferable to younger students, however, as they have a significantly higher level of maturity.

The Young Scholars Program gives us, as professional archaeologists, the opportunity to show members of the general public, indeed, the future leaders of our community, the value of scientific archaeology. Public support for archaeology will always be an important issue in our profession. We do far too little to inform the public about what we do with their taxes. Such education will be the key to continued success with historic preservation legislation.

New Ebenezer: A Sweaty Volunteer's Account

Stephen Reynolds
Home-Schooled Student
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You may laugh at the title, but it is true. I learned how to sweat in 115 degree weather and 99 percent humidity, ask a meteorologist about that! Hello, I'm Stephen Reynolds, and when I was thirteen I went on a dig at New Ebenezer. In case you do not know anything about New Ebenezer, I will begin with a simple history of the site.

Historically, it began as a tribal region of the Yuchi Indians who were later incorporated into the Creek nation. About the mid-eighteenth century, in Europe, the Salzburgers were being persecuted for their Lutheran beliefs. Their name came from Salzburg, Austria, the city they used to live in and near. They dreamed of America's freedom. They found a way across the Atlantic Ocean with the founder of the Georgian colony, General James Oglethorpe. They petitioned him for some land and received Ebenezer as a result. They soon found it to be an unsuitable site and petitioned him again for the present site of New Ebenezer. They received it and developed it.

The town's heyday ended during the Revolutionary War. Most of the people moved away, the houses were ruined, and the church was once used as a stable. After that it fell into disuse, except for cultivation, as aerial photographs from the 1930s to the 1960s depict. Artifacts show that there was a homestead there during the 1880s. Most of the town property not owned by the Jerusalem Lutheran Church was purchased in the twentieth century by an original Salzburger descendant. He and the Salzburger Society then hired two archaeologists from Athens, Georgia, to work on the site. They wanted a responsible teen and I volunteered. I worked for three weeks and my younger brother two weeks.

There! You may think that I used a history book for the above statements, but actually that is in my head from two years ago. As you can see, I learned much more than how to sweat. For example I learned about everyday life in early Georgia during the 1750s—a living history lesson. I also developed an appreciation for history, because it was not like a classroom situation where I could goof off. Rather, it was learning as we found the artifacts and pieced together the puzzle of discovering how the colonists lived.

Due to learning firsthand, I'm now considered, by my family and friends, an expert on colonial pottery and other artifacts. They are always bringing everything from Indian pottery to yesterday's broken teapot for me to date.

I enjoyed archaeology because I like the hard work with pleasant companions. We had to battle thorns in our hands, ticks everywhere, weeds tripping us. But we ended up conquering those because of my companions' expertise at everything from squashing gnats to using a transit and tape. It was hard, but enjoyable and different than the classroom. It's like a field trip but you get more involved. I always was looking for a great find (a button, or maybe a whole pot!).

Archaeology is very important because it helps teach history and fill the gaps. Without it, history would be incomplete. We would have to depend on the sometimes erroneous accounts by early historians. As for prehistoric periods, our information about their lifestyles would be non-existent.

Archaeology helped every part of my education because it was an incentive for me to work harder and better. I had to use math for calculations. My English, reading, and spelling was improved by reading archaeology reports for background knowledge of the dig. Of course, my P.E. class was everyday! I saw my knowledge of Georgia history expand a lot. For example, did you know that both New Ebenezer and Savannah had silk factories and had exported silk to England?

I learned to be persistent at working even if it seemed boring, which was only before we started finding artifacts. I also learned how to use a transit and tape, how to draw earth formations, how to survey an area for artifact locations, and how to dig while leaving artifacts *in situ*. Georgia wildlife, both plant and animal, was introduced to me first-hand.

As you can tell, I enjoyed the archaeological project, and if I have a chance at another dig I'll try for it. The advantages vastly outweigh the hard work. See you at the dig!

Chapter II: Exercises

INTRODUCTION TO THE EXERCISES

These exercises represent a variety of interesting ways to present archaeological concepts while honing students' skills in traditional subjects such as English, reading, and math and less frequently taught concepts such as logic, inductive and deductive reasoning, observation, and research. The activities range from twenty minute exercises to some that take several class sessions (or longer) to complete. They allow students to discover not only the techniques of archaeology, but the reasons behind the methods. The activities run the gamut from prehistoric to historic archaeology and include ideas that allow students to learn about other cultures as well as arriving at a new understanding of their own culture. Many of the activities can be modified to suit the parameters of a particular class, grade, or time frame available.

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Story in a Bag*

GRADES: 3rd through 6th

GOALS: To encourage observation and reasoning skills, to practice writing and recording.

INTRODUCTION: Archaeologists piece together how people lived from the things they left behind. They never find everything, instead they find fragments of the whole puzzle. Artifacts that are found are carefully recorded in context, then described in detail. Initially this is done without implying anything about artifact use. How people lived is then carefully reconstructed from this primary data. In this exercise, students look at familiar "artifacts" out of context and try to figure out who the artifacts describe. See if your students can match classmates to "artifacts".

ACTIVITIES: 1. Have each child select 12 items from home that describes him/her. Stress that there should be no names or identification on any of the items. As each child turns in the bag, the teacher marks a code on the bag and by the child's name on a list. This keeps it anonymous.

2. Students are assigned partners and each pair is given two laboratory record forms, a metric ruler, a pencil, and one bag of twelve items. One child removes the "artifact" from his/her bag; then the pair discuss observations, and the other child records each item on the laboratory record form. This procedure is followed for all 12 artifacts in the bag.

3. The other half of the bags is passed out when the students complete their laboratory record forms for the first set. Upon receiving bag 2, the partners switch jobs. The "excavator" becomes the recorder and the recorder from the first bag now gets to remove the "artifacts" from the bag for closer inspection.

4. When all children complete their bags, allow students to discuss their findings and tell the class if they think they have solved the puzzle. Questions for class discussion include: What are we able to discover by looking at this small sample of objects? Can we learn anything about that person's life?

*Taken from "Archaeology for the Classroom" by Carol Ellick in Archaeology and Public Education, Vol. 1, No. 1. Committee on Public Education, Society for American Archaeology.

Capsule of America*

GRADES: 4th through 12th

GOALS: To learn the definition of an artifact, to think about American culture through artifacts, and to improve group interaction skills.

INTRODUCTION: Artifacts are any item made or modified by people. A stone arrowhead and a shell worn as a necklace are examples of artifacts. Items we use today in our everyday life will become the artifacts of future archaeologists, particularly abundant in huge landfills. Artifacts can indicate an individual's wealth, status, heritage, and personal preferences. Many artifacts from many individuals in a culture can reveal patterns indicating that society's activities, wealth, technology, beliefs, and values.

ACTIVITIES: 1. Discuss the meaning of "artifact" and what an artifact can show about the people who use it.

2. Divide the class into four groups. Have each group list ten artifacts that represent American life to send to a distant place (New Guinea? another planet?). Each group should list the artifacts and what they tell about our life.

3. Bring the groups together and have each group read its list of artifacts and reasons. Have the class decide on a list of the 20 artifacts that tell the most.

4. Lead a group discussion about the list. What is the picture of American life based on the artifacts? What things are missing or misrepresented? How is this similar to artifacts excavated by archaeologists on a real site?

*Taken from Classroom Archaeology: An Archaeology Activity Guide for Teachers. Nancy W. Hawkins, Division of Archaeology, Baton Rouge, Louisiana, 1986.

Today's Artifacts*

GRADES: 4th through 8th

GOALS: To examine American culture through artifacts, to participate in the archaeological activity of artifact analysis, to learn the meaning of "artifact function", and to improve descriptive and analytical skills.

INTRODUCTION: Laboratory analysis of artifacts following an excavation is one of the most important stages of archaeological work. Archaeologists examine artifacts and record the number or weight of each type, the raw material it is fashioned from, the dimensions, and the decoration. This data is compiled and tabulated to produce an artifact pattern for the site that can be compared to other sites. The comparison helps add more pieces to the puzzle of reconstructing past events and cultures.

ACTIVITY: 1. Select five artifacts for students to analyze. Any artifacts may be used, but suggestions to consider are coins, pop tops from aluminum cans, records, kitchen utensils, religious jewelry or figurines, and toys. The students will need to be able to handle and examine these, so it is a good idea to bring multiple sets of the artifacts. One set of five artifacts for each five students is an ideal number. This way, each student can examine and describe an artifact, then exchange with another student. Label each artifact with an identifying number or letter.

2. Have each student select an artifact and write a description of the appearance of the artifact. For example, artifact #16 (a record) might be described as a "black flat circular disc with grooves on both sides".

3. After the students have described all the artifacts, they will assign a function to each. They should pretend they are archaeologists in the year 3000 who know very little about twentieth-century life in Georgia. The conclusions they draw about how these artifacts were used should be logical, but may be completely untrue. For example, artifact #16 could have been used as a recreational object to throw between two people or a wheel on a child's cart. Students should be encouraged to be creative without being ridiculous.

4. Students should draw conclusions about the culture based on the artifacts analyzed. Once again, the ideas should be logical, but not

necessarily correct. The conclusions should be drawn from all five artifacts studied together.

5. Lead a discussion about the activity. What did students learn about how archaeologists draw conclusions? How was the activity similar to the way an archaeologist works? (Like archaeologists, the students described the artifact's appearance, function, and what it showed about the culture.) How was the activity unlike real archaeological work? (Ordinarily, when archaeologists study artifacts from a site they look at more than five artifacts, compare the findings with those from other sites, know about features at the site, know the context of the artifacts, and are very conservative when they suggest artifact function and what the artifacts tell about the culture.)

*Taken from Classroom Archaeology: An Archaeology Activity Guide for Teachers. Nancy W. Hawkins, Division of Archaeology, Baton Rouge, Louisiana, 1986.

Archaeology of a Penny*

GRADES: 3rd and higher

GOALS: To develop skills of observation, writing, and reasoning, and to learn why artifacts are useful to archaeologists.

INTRODUCTION: Archaeologists try to record every piece of information from an artifact, including the raw material it is made of, its source, its function, its role in society, its reflection of an individual's wealth and status, its intrinsic and relative value, and its adaptation or modification. For these reasons, even mundane objects are quite valuable to archaeologists. In fact, a piece of pottery is more valuable, in terms of information, than a gold bar. The bar only tells the archaeologists that someone had a lot of money. The pottery, however, can indicate kinship systems, trade networks, wealth, personal taste, etc.

ACTIVITIES: 1. Give each student a penny and have them record all the information they can deduce. Have students find the following types of information, using reference material if necessary.

a. What is the date?
b. Whose picture is on the coin? Why?
c. What is the monetary system?
d. What religion is represented?
e. What is written on it?
f. What is the language?
g. What is the meaning of the phrases written on it?
h. Describe the building on the coin? Why that building?
i. What is the country?

2. Discuss the significance of archaeologists studying every artifact they uncover. Even small artifacts, like a penny, can reveal a wealth of information.

*Taken from Archaeology: Tools and Techniques of an Outdoor History/Science Class for Young Researchers, Clemiegene R. Edwards. Project ALERT, Richland School District Two, Columbia, South Carolina.

Site on the Floor*

GRADES: 1st through 8th

GOALS: To demonstrate the principle of context, and the relationship of artifacts and their provenience, or particular location; to encourage observation and reasoning skills, and to encourage preservation of archaeological sites.

INTRODUCTION: An artifact by itself can only tell us about itself. If recorded in its undisturbed location (in situ) the artifact fits in as a piece of the whole puzzle. Removing an artifact from its provenance changes the story of what happened at that site. Hence the problem with private collectors, pothunters, and vandals.

ACTIVITIES: Gather together 15–20 artifacts or artifakes (modern replicas—see Chapter III for sources). These might include a hammerstone, a core, several flakes, a projectile point, a grinding stone, four plain potsherds, four decorated potsherds, seashells, or other trade items. Some artifacts should indicate trade; some need to be utilitarian. Other artifacts should be decorative.

1. Lay out a "site" on a flat surface. Group similar items together to show different activity areas. For example, the stone tool making area will have the hammerstone, the core, flakes, and projectile point. Next to the stone tool area might be a scatter of sherds, etc. Explain the artifacts and the idea of context to the students. Show how the artifact concentrations are patterns. Did the people make pottery or trade for it? How far was the ocean?

2. Act out finding the site. State that you have always wanted to own some Indian arrowheads and things and that they would look great on your coffee table. Be selective in the artifacts you take. Pocket the arrowhead, decorated pottery, and other "pretty" items, leaving the "plain" ones behind. Now ask students what happened to the site. How did the story change? What is the new picture of how people lived? Can we tell if they traded? Did they create "fancy" items? Did they hunt? The answer to these questions no longer exist. What do vandals do to the site?

*Taken from "Archaeology for the Classroom" by Carol Ellick in Archaeology and Public Education, Vol.1 No. 2. Committee on Public Education, Society for American Archaeology.

Excavating a Wastebasket*

GRADES: 4th and higher

GOALS: To encourage logic and reasoning skills and to introduce the principles of stratigraphy.

INTRODUCTION: Most archaeologists study trash. That is, most artifacts excavated on sites were discarded after they broke or were no longer fashionable. These artifacts, or other peoples' trash, whether 10,000 years old or 50 years old, provide archaeologists with clues about how people lived. The layers or stratigraphy of the trash tell archaeologists the chronology of events.

ACTIVITIES: 1. For one day, do not empty your classroom wastebasket. (Better yet, get another teacher to prepare the wastebasket for you). Compact the material in it after each class.

2. Have students excavate this site to reconstruct the previous day's activities and record their conclusions.

3. Have students read their conclusions. Discuss with students the accuracy of their interpretations, the nature of the evidence they had to work with, and the problems associated with interpreting fragmentary evidence.

4. How is this like archaeology? Do archaeologists see the entire picture when they excavate the trash, or artifacts, of a site? Why not? What do the various layers mean? Why are they important?

*Taken from A Teacher's Resource Packet: Local Archaeology. The National Museum of Natural History, Smithsonian Institution, Washington, D.C.

Newspaper Archaeology*

GRADES: 4th and higher

GOALS: To encourage reading, writing, and deductive reasoning, to develop logical and analytical thought, and to understand the ways archaeologists draw conclusions about people based on discarded things.

INTRODUCTION: Most of the remains at an archaeological site are those that were discarded or abandoned, so archaeologists do not get a complete view of all the artifacts that people used.

ACTIVITIES: 1.Discuss the artifacts archaeologists study. Ask each student to select ten classified "For Sale" advertisements from the newspaper or advertising tabloid. These ads should be ones that could have been placed by one imaginary family. The ads will provide clues about the size of the family, number and age of the children, whether the family lives in a rural or urban area, and who knows what else. Students should cut the ads out of the paper, eliminating names, addresses, and phone numbers of the sellers. Each student should paste or tape their ads on a piece of paper.

2. Based on the ads, each student should write on a separate piece of paper a description of the imaginary people who placed all the ads. The description should explain why the family had each of the items that are now for sale (e.g., someone selling a five-bedroom house for $400,000 is wealthy and may have several children).

3. Have students turn in the ads and the family descriptions to you. Then redistribute the ads to other students, being sure that each one has a new page. Then each student should write an analysis of the new family's "artifacts." Collect these pages and review them.

4. Discuss how analyzing classified ads is similar to analyzing remains at an archaeological site. Why do people sell things now? Why do people leave things at an archaeological site? Compare students' interpretations of the same ads. How were they alike and different? What does this indicate about the conclusions an archaeologist draws? Does this explain why archaeologists are so careful to recover everything possible at an archaeological site?

*Taken from Classroom Archaeology: An Archaeology Activity Guide for Teachers. Nancy W. Hawkins, Division of Archaeology, Baton Rouge, Louisiana, 1986.

Graveyard Archaeology*

GRADES: 4th and higher

GOALS: To develop reading, math, research, and analytical skills.

INTRODUCTION: The study of the material culture of cemeteries began in earnest only within the past three or four decades. Archaeologists and historians are realizing the abundant information concerning status, economics, disease, craftsmanship, and census data available on tombstones.

ACTIVITIES: 1. Have the students visit a local cemetery and answer the following questions: a) How old are the oldest gravestones? b) Were there any natural, unmarked rocks on some graves? How old are they and what do they mean? (They cannot be dated. They may mean that a family could not afford to purchase a tombstone, or that rock was not easily available in some places during some historical periods. Early settlers, slaves, and poor tenant farmers often used natural rocks instead of expensive, carved tombstones to mark burials.)

2. What can be deduced from the gravestones about the community?

a. Its size. Are there many tombstones from one time rang and few from another?

b. Its ethnic composition. Do the names indicate certain ethnic groups, or is there a mixture?

c. The average lifespan through time. Are infant burials more common farther back in history? What are the average lifespans in the 1800–1850s, 1850s–1900s, 1900–present?

d. Disease. Do many of the tombstones have similar dates indicating epidemics? Were many of the deaths during different years, but similar seasons?

e. Family size. Are there large family plots within the cemetery? Do the family plots get larger as you go back in time?

f. Economic differences. Are some tombstones ornate and others simple? Are some made of local rock and others of costly imports?

g. Social differences. Are some people buried outside of the cemetery wall? If so, is this do to their ethnic background, poverty, occupation, or religious beliefs?

3. Students can take photographs and do research on gravestone designs, symbolism, and change through time. Scholars have

studied the way imagery and tombstones styles have changed over the centuries. The images often depict social and religious philosophies which have also changed through the years. All make interesting report topics for students. (Additional information on graveyard study may be obtained by writing Ann Bay, ART TO ZOO, Office of Elementary and Secondary Education, A&I 1163, Smithsonian Institution, Washington, D.C. 20560).

*Adapted from A Teacher's Resource Packet: Local Archaeology. The National Museum of Natural History, Smithsonian Institution, Washington, D.C.

School Cultures, Part 1*

GRADES: 4th and higher

GOALS: To encourage observation, reasoning, and analytical skills, and to demonstrate the techniques used by archaeologists.

INTRODUCTION: Archaeologists survey areas of land looking for artifacts on the ground surface. These artifacts usually indicate that there is an archaeological site in the nearby vicinity. Archaeologists make a map of the area including natural and man-made elements. The artifacts are noted on this map and a site boundary is drawn. Archaeologists then record the site and its location in the State Site Files in Athens, Georgia. This record allows archaeologists to study locations of sites across the state, and helps them decide where archaeological excavation should take place. The artifacts found on the surface often tell them the size of the site, its age, and what kind of site may be buried underground.

ACTIVITIES: 1. Divide students into teams. Secretly assign each team to a different area of the school grounds (cafeteria, playground, parking lot, front of school along road, etc.). Each team is to survey its assigned area and come back with:

a. A collection of the "artifacts" they gathered off the ground from their area.

b. A description of the physical characteristics of the area surveyed. (Do not refer to the area by name, only by a description.)

2. Have teams exchange artifacts and site descriptions. Each recipient group analyzes the evidence from the surveys and tries to guess the functional name of the area surveyed.

3. Have students answer the following questions:

a. What other kinds of information would have been useful to you in arriving at the conclusions or answers to the questions posed (a map, photographs, more artifacts, etc.?).

b. What would happen to your interpretation of the artifacts if the site description was changed?

*Taken from A Teacher's Resource Packet: Local Archaeology. The National Museum of Natural History, Smithsonian Institution, Washington, D.C.

School Cultures, Part 2*

GRADES: 4th and higher

GOALS: To develop scientific classification skills and logical reasoning based on evidence, and to demonstrate classification techniques employed in archaeology.

INTRODUCTION: Archaeologists recover large numbers of artifacts. To get all the accurate information they can provide, they must be transformed into useful, organized data. Archaeologists standardize information by classifying artifacts into similar groups and tabulating information from each group. These data can then be compared to different parts of a site, or different sites in the region.

ACTIVITIES: 1. Take student-gathered artifacts from the site surveys in the School Cultures, Part 1 activity; or have each student contribute five dissimilar artifacts from his or her home.

2. Divide students into groups. Each group takes one *assemblage* or group of artifacts and develops a system of classification for it. (They will probably classify by the raw material from which each artifact was made.) Ask them to explain their systems.

3. Ask students to suggest what other systems might be used. An easy one is that of classifying items by their function. Another one is by date (i.e. how old) or context (location derived from).

4. Ask students what kinds of questions they might be able to answer by using these systems of classifying:

a. Material. What kinds of resources were available to the society? What kinds of technology did the society have?

b. Function. In what kinds of activities did the people of this society engage?

c. Date. How long did the society endure?

d. Limitations. How is each classification system limited in its use? (If you cannot tell the type of raw material because the artifact is too deteriorated or burned, if the function of the artifact is an enigma, if you cannot accurately date the artifact, etc.) How do these limitations hinder the archaeologists, and how do they try to circumvent these problems?

*Taken from A Teacher's Resource Packet: Local Archaeology. The National Museum of Natural History, Smithsonian Institution, Washington, D.C.

Sites and Threats*

GRADES: 3rd through 5th

GOALS: To discover the importance of archaeological sites as non-renewable resources, and to understand the negative effect of modern activities on archaeological sites.

INTRODUCTION: Archaeological sites are being destroyed at an alarming rate. An educated public can help stem the tide of destruction, and support both politically and personally the preservation of archaeological sites.

ACTIVITIES: 1. Discuss the importance of archaeological sites. Any place where people have left remains is an archaeological site. Often these sites are the only record of people who lived in Georgia in the past. Even sites that date to historic times, after Europeans and Africans came to the state, provide information about everyday life that cannot be found in written descriptions. Archaeological sites contain information as important in understanding our cultural past as that contained in books. Just as books are protected in the library, it is important to protect archaeological sites.

2. Have students describe different types of archaeological sites. Suggestions might include Indian campgrounds, shipwrecks, cemeteries, remains at antebellum plantations, colonial settlements, and historic forts. Hundreds of other specific ideas might be mentioned. It is important for students to know that historic and prehistoric sites, whether on land or underwater, large or small, give important information about people of the past.

3. Encourage students to discuss threats to archaeological sites. Any activity that disturbs the ground can harm a site. Threats that should be mentioned include road and building construction, farming, energy exploration, timber harvesting, and artifact collecting. All of these destroy the relationships of the artifacts, and therefore reduce the amount of information that can be obtained from the site.

4. Attach a long piece of paper to the wall (freezer paper, newsprint, butcher paper, etc.) Have students draw or find a picture of an archaeological site and a picture of one threat to that site. Each student will contribute these pictures to form a long mural of sites and threats.

5. Lead a discussion about what can be done to protect archaeological sites. Mention legislation that prevents projects that have federal funding or that require federal permits from proceeding before archaeologists check to be sure no important sites will be destroyed. All sites on publicly-owned (federal or state) land also are protected in this way. Individuals who own land where artifacts have been found have to make personal decisions about whether to allow destruction of a site. They can help save a site by not disturbing the land in that area and by preventing digging for artifacts at the site. This protects the site for future generations.

*Adapted from Classroom Archaeology: An Archaeology Activity Guide for Teachers. Nancy W. Hawkins, Division of Archaeology, Baton Rouge, Louisiana, 1986.

Stratigraphy and Chronology*

GRADES: 4th grade and higher

GOALS: To practice using logic to solve problems, to learn how an archaeologist uses relative dating, and to learn the terms stratigraphy and relative dating.

INTRODUCTION: Sometimes archaeologists are unable to use absolute dating techniques (such as radiocarbon dating) in order to get a calendrical date for a cultural level. Instead they will use relative dating to establish that one level (or site) is older or younger than another one. One method of relative dating correlates strata from several test units at on site or several sites within an area.

ACTIVITIES: 1. Explain to students the term "relative dating" and its importance.

2. This exercise illustrates stratigraphic correlation. List on the board the strata from three sites (each letter represents a different stratum).

Site #1	Site #2	Site #3
E	C	T
C	R	O
T	A	M
O	T	P

3. Tell the students to copy these onto their papers and to put these eight different strata in order, with the oldest listed on the bottom line and the youngest listed on the top line. Point out that within each column, the strata are now in order, with the oldest at the bottom and the youngest at the top.

4. The correct order is shown below:

E
C
R
A
T
O
M
P

5. Help the students understand the logic involved in this exercise. Point out that new information is gained from each site. Now try another combination. Each letter represents a distinctive group of artifacts in a distinctive level. Have students put the artifact groups in order.

G
S
J
J
V
N
S
W
Q
W
Z
S

6. The correct order is shown below:

G
J
N
Q
S
V
W
Z

7. Discuss how relative dating helps archaeologists establish a chronology for a region. If it turned out that after excavating 20 sites in a certain area, archaeologists found only eight distinctive groups of artifacts and they could always put them in the same order through relative dating, what could they conclude? This process is the one used by archaeologists to establish chronologies showing the order in which cultures occur in time.

*Taken from Classroom Archaeology: An Archaeology Activity Guide for Teachers. Nancy W. Hawkins, Division of Archaeology, Baton Rouge, Louisiana, 1986.

Excavation Unit (Dig Box)*

GRADES: 1st through 8th

GOALS: To introduce archaeological concepts, including stratigraphy, scientific excavation, digging, mapping, recording, analysis, and report writing, and to illustrate the various periods of prehistory and archaeological evidence of these periods.

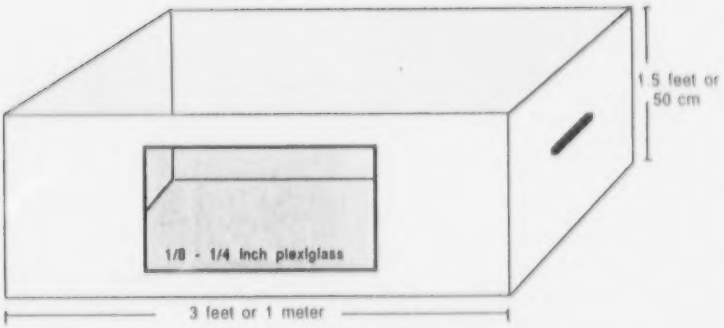
INTRODUCTION: Build a 1 x 1 meter (3' x 3') box of plywood and plexiglass (Figure 8). Fit the window onto the box in the front to allow students to see the soil stratigraphy. Divide the box into four levels and a small subsoil level. These arbitrary levels serve as markers for the students to excavate by, and also as markers for filling the box with soil and artifacts.

When planning the activity, gather artifacts from an archaeological collection or use replicas, which are recommended, encompassing four distinct periods. You could use collections of PaleoIndian, Archaic, Woodland, Mississippian, Historic, and Modern artifacts. Assign numbers to each artifact using masking tape and a permanent marker. Then list the numbers with the artifact type. Write a paragraph about each period telling about the people, how they lived, their subsistence, what they ate, if they traveled a lot, what kind of tools they had, etc. Write the associated artifact numbers at the top of the paragraph. Forms similar to those used by archaeologists should be used (Figures 9, 10) to enforce the importance of note taking and mapping in archaeology.

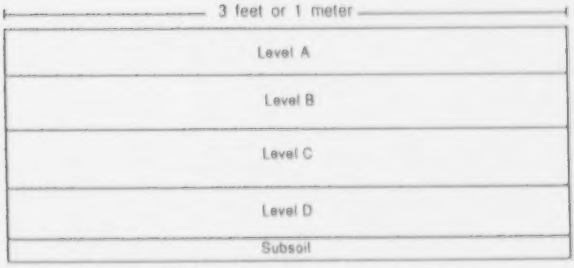
Another approach could be used in which groups of students make up cultures that have distinctive artifacts. Each group of students would "dream up" a culture and select certain artifacts to represent their group. Another group would then excavate the unit and analyze and describe the first group's culture.

Gather buckets of sand, gravel, dirt, etc. Potting soil works well for the top layer. Select soils that are distinct and have different colors. It may take as many as ten large buckets of soil to fill the box. Gather tools used by archaeologists—masons' trowels, dust pans, whisk brooms, spoons, brushes, etc. Make screens out of large buckets by covering them with 1/4 inch window screen. By screening into the buckets, you can recover the dirt for future use and the project might be a little less messy (although not much!).

ACTIVITIES: 1. Tell the students a story about how over thousands of years the Southeast was inhabited only by the animals and pour (dump is a better word) a load of light, subsoil-colored sand into the box. Talk about geologic activity and pour another



Box Dimensions and Details



Interior Setup

Figure 8. The stratigraphy box used in this exercise.

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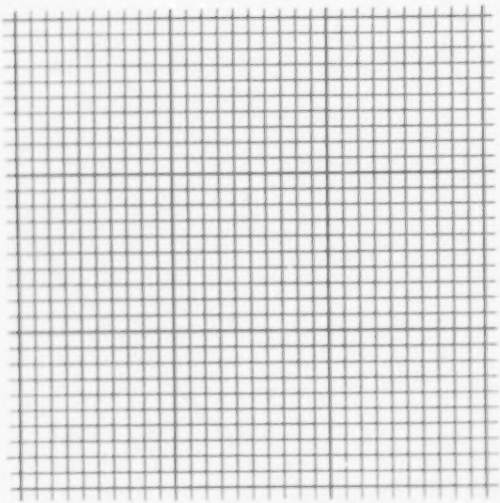
load of soil to demonstrate how strata were formed. Then talk about the first Indians coming into North America and how, just like the children loose things in their backyards, the Indians lost things while traveling or hunting or during daily activities. While talking about this, drop a couple of artifacts into the box. Talk about wind, rain, etc., and dump more dirt over the artifacts. Continue the story until all of the artifacts from the earliest group are used or you reach the line dividing the levels. Talk about how people developed new technologies, how new people moved in, or how contact with other groups of people caused things to change. This would follow with a similar scenario of people losing items and geological activity. Each story should tie into events associated with each artifact and culture. After all of the artifacts are in the box, talk about archaeology and how archaeologists study people who lived in the past by looking at the things they left behind. Talk about stratigraphy and its importance in dating artifacts, using the window to illustrate (by the time you talk about stratigraphy, most have already noticed the soil changes in the window). Discuss techniques and the value of taking good notes and making drawings of where things are found (you can use forms as in Figures 9, 10).
2. Divide the group into four smaller groups. Three groups can be taken inside to look at artifacts, books, or drawings while the first group excavates their level. When they are finished, they take their bag of artifacts into the "lab" to identify and analyze. This essentially means finding the number on the artifact and matching with the list. When all the numbers have been matched, they find the page that includes their numbers and describes the people associated with their artifacts. The process continues until all groups have excavated their levels and have completed their lab work. Then bring the entire group together to discuss their cultures and how they differed. Encourage students to suggest how the cultures may have varied and how changes may have taken place. Be sure that the children know that when archaeologists excavate, the artifacts do not have identifying numbers on them. Instead, archaeologists must study the artifact, its shape, its function, and what it is made of to know about its name and date. Throughout this exercise stress the importance of archaeological ethics—especially "not to dig on your own!!!".

The exercise takes several hours to complete. Students seem to enjoy it quite a bit. There are some problems—all boys want to dig and never take notes. This can be solved by assigning tasks and if possible rotating somewhat. It usually takes two people who really understand archaeology to do this exercise, especially to be able to supervise the excavation and the analysis.

*Developed by Julie Barnes Smith.

ARCHAEOLOGICAL EXCAVATION FORM

Site Name_____ Site Number_____
Excavators Name_____ Recorders Name_____
Date_____ Level Number_____



Artifacts found_____

Notes _____

Figure 9. Example of an archaeological excavation form.

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ARTIFACT ANALYSIS FORM

Artifact type	Artifact Period			
[redacted]	Archaic	Woodland	Mississippian	Historic

Figure 10. Example of an archaeological artifact form.

Trenchcoat Archaeology:
The Historical Archaeologist as a Detective*

GRADES: 4th through 12th

GOALS: To develop reading, writing, and independent research skills, to understand causal relationships, to foster interviewing and speaking skills, to develop map-reading skills, and to become aware of cultural and geographical changes through time.

INTRODUCTION: Historical Archaeology is the study of artifacts and sites from cultures existing after the introduction of writing. Historical archaeologists have access to written records that prehistoric archaeologists do not. While archival records provide historical archaeologists with a great deal of information, they do not take the place of excavation. Often historical papers only recorded famous or wealthy people, or noteworthy events. They frequently neglected the world of the average person. Many records from the past were written by literate, white males, who ignored or misrepresented the lives or poor, illiterate whites, black males, and most females. Historical records often are biased toward the writer's viewpoint or the politics of the times. The historical records for many sites have been lost or destroyed over the years, particularly in courthouse fires that occurred in virtually every county in Georgia. Omissions, biases, and destruction require archaeologists to use historical records to supplement digging.

The following activities use many of the same techniques historical archaeologists employ when doing records research before excavating an historical site. Higher grade levels can participate in the activities in greater detail. Instruct the students to imagine that they are historical archaeologists about to excavate a site. Before they can excavate it, however, they must find out everything they can from the historical record.

Historical Archaeologists: Students
Archaeological Site: School

ACTIVITIES: 1. Using school records and school and local libraries, have the students research the name of their school. Write a short paper on who it was named after, when it was constructed, etc. Was it always a school? Did it ever included grades not currently taught? If the school was named after a town or location (e.g., South Chatham High or East Jefferson Middle School), research the town or locational name.

2. Obtain a copy of the topographic map that includes your school. These are available at a nominal charge from the Georgia Geologic Survey, 19 Martin Luther King, Jr. Dr., SW, Room 443, Atlanta, GA 30334 (404)656-3214. A free index is available to assist in determining the map quadrangle name and map scale. This information is necessary when ordering a map. South Georgia topographic maps are also available at the Environmental Protection Division, 2024 Newton Rd., Albany, GA 31708, (912)439-4400. Topographic maps also are availabie from several Georgia Area Planning and Development Commissions. Another source is the U.S. Geological Survey, Eastern Region—Map Distribution, 1200 S. Eads Street, Arlington, VA 22202, (703)557-2781.

Have the students examine the map and practice using the scale of miles and north arrow. Discuss the legend, explaining symbols such as contour lines, elevations, rivers, swamps, lakes, etc., and symbols for man-made entities such as county line boundaries, railroads, highways, parks, churches, cemeteries, transmission lines, quarries, etc. Ask the students to locate and write down two specific examples of each type of symbol recorded on the map. Have them locate their school. Develop specific questions before class dealing with the topographic map. Ask students these questions for an oral or written response, e.g., What is the closest river to the school? In what direction would you travel to get to the nearest town from school? What county is the school in? Name one neighboring county. The area around the school drains into what major river drainage? How many structures are visible on the map within a five mile radius of the school?

3. Try to obtain maps older than your topographic map. Old road maps or old atlases from the local library, old topographic maps from the soil conservation service or photocopies copies of them from university libraries (such as UGA Science Library), or copies of aerial photographs from the county tax assessor's offices are all useful sources. Have the students compare it to the topographic map. Help the students discover the changes through time as illustrated on the different maps. Has the area become more or less rural? Which map shows more structures present? Have the towns become larger or smaller? Have new towns been established? Are new schools, churches, and roads present? Have lakes been dammed or ponds constructed? How has the area around the school changed? What things have stayed the same? How many years difference are there between the two maps? After this classroom discussion, have the students write a summary of the similarities and differences between the two maps, and what they can tell us about the area as a whole.

4. If your school has yearbooks or annuals, have the students locate them in the school library. Assign each student a year and allow him or her to write down the names of ten different people from that year's annual.

Like historical archaeologists tracking down deed records, property titles, and local informants for interviews, the students will try to find at least one person on their list still living in the area. They should look in the phone book, and the phone books for surrounding areas to locate these people. Once located, the student can interview that person and write down the responses.

Prior to the interview students should brainstorm in class to produce a list of questions for the interview. This will allow standardization among all students' interviews and make comparisons easier. Discuss in class what would be interesting or useful to know about the school's past. This can include questions ranging from the physical description of the school building to cultural questions about what subjects were taught, segregation, etc. Each informant that is interviewed will have different answers, depending on the years in which they attended the school.

When the assignment is completed, have the students present oral reports based on their interview. Instruct them to leave out any mention of dates or the time that the informant attended the school. (Explain to them that frequently archaeologists discover important records with no dates written on them. When this happens, they must try to develop a sequence of events based on the information at hand). Following the presentations, have the class try to arrange the interviews in general, chronological order, without knowing the dates that each informant attended school. The chronological arrangement should be based on evidence in the interview. For example, was the school described in some interviews as smaller then it is today? Was it made out of different materials? Do certain types of subjects indicate a time difference? For example does anyone mention the introduction of "New Math", or studying penmanship? Do informants mention a time when girls were not allowed to take Shop Class and boys could not choose Home Economics? Do some of the names of the informants belie their ages? (For instance, some names like Eula May, Homer, Beulah, Agnes, Francis, Gertrude, or Arnold were much more common and popular in specific times, such as the early 1900s, the 1930s, or the 1950s.) Lead a class discussion based on the results of the oral interviews What was learned? What was not discussed? Why would oral interviews be useful to historical archaeologists? Why should they not be the only source of information?

5. Divide the students into groups. Assign one group each to the school archives or library, the local library, and the local historical society. Instruct each group to locate any information regarding their school. For example, they should look for old photographs of the school, or of people with the school in the background; newspaper articles; programs from ceremonies such as the school's ribbon cutting, graduations, etc.; records describing new school additions, the introduction of new subjects or programs, corporate donations to the school, etc. Have the students present a written and oral report about the data they gathered. Following the reports, lead a class discussion on what new information was learned and how it supplements the knowledge gathered through maps and oral informant interviews.

6. If the school is relatively new, with little in the way of historical records, divide the class into groups and arrange for each group's transportation for one of the following activities. Have one group interview the principal about the school, its recent history, the number of instructors currently teaching, the subjects taught, etc. Have another group interview a member of the schoolboard who was involved in establishing the new school. The interview could include question concerning the process of deciding when a new school is necessary, funding, selection of architects and construction firms, etc. A third group can interview a member of the architectural firm involved in designing the new school. What fundamentals are necessary in a school building? What differences are there in schools designed today as compared with those from twenty and fifty years ago? What types of government regulations must be followed when designing a school? Following group oral presentations, discuss this new information with the class. Based on the age, design, and building materials, what might be left of the school in the archaeological record one hundred years from now?

7. One of the most important things archaeologists do is to turn their data and interpretations into a professional report, so their research will be saved permanently for other scholars to study. The report is especially important when a site will be destroyed by construction projects, or even when it has been excavated archaeologically. Even scientific archaeological excavation destroys a site, but if a thorough report is produced, the information is saved forever. Have the students compile all the information gathered during the class activities into a written report and scrapbook. Present the book to the school library for permanent curation.

*Developed by Rita Folse Elliott, LAMAR Institute. Watkinsville, Georgia.

Date Clues*

GRADES: 4th and higher

GOALS: To improve math and logic skills, to introduce students to a dating technique used in historic archaeology.

INTRODUCTION: The artifacts at an archaeological site are often items that were discarded when they were broken or no longer in style. If archaeologists can determine when these were made, they can get a good idea about when the site was used. Historic archaeologists in Georgia study sites that date from the years after Hernando de Soto arrived in 1540. Historic archaeologists study sites dating from this time through sites dating back only fifty years from the present.

Non-Indian artifacts from historic sites can usually be dated relatively well, because manufacturers kept records of their designs. When archaeologists know the date an artifact was first made, they can conclude that the site was used sometime after that. When several artifacts are found together during site excavation, and there is no indication of disturbance, the archaeologist can conclude that these were probably left there at the same time. Therefore, the archaeologist uses all the artifacts found together to give an indication of when the site was used.

ACTIVITIES: 1. Discuss the conclusions archaeologists can draw about the date a site was used based on artifacts found there.

2. Show the students the list of artifacts below, and tell them that these were found together at a plantation site in Georgia. Listed on the left is the artifact and on the right is the range of dates during which this type of item was manufactured.

Ointment Jar	1780–1830
Stoneware Plate	1750–1820
Medicine Bottle	after 1780
Square Cut Nails	1790–1820
Pipestem after	1760
Brass Button	1800–1830

3. Have the students estimate when the site was used and discuss their reasoning. If all the objects were discarded at approximately the same time, they must have been left there after 1800. This can be determined because the button type was not manufactured until 1800. It is difficult to say with certainty when the last date is that

these items could have been discarded, because any of them could have been used for many years after they were last made. For example, if a china pattern was discontinued in 1950, it could be well cared for and still used into the 21st century. Therefore, an archaeologist will hesitate to say with complete certainty when a site was last used.

However, since two of the artifacts listed above were manufactured by 1830, it is likely that these were left at the site around this time. A reasonable conclusion is that the site was used between 1800 and 1830. To be safe, an archaeologist might add 20 years to the latter date, and say the site was used during the first half of the nineteenth century.

*Taken from Classroom Archaeology: An Archaeology Activity Guide for Teachers. Nancy W. Hawkins, Division of Archaeology, Baton Rouge, Louisiana, 1986.

Absolute Dating*

GRADES: 6th and higher

GOALS: To discover the usefulness of chemistry and other sciences, to learn the difference between relative and absolute dating, and to understand the dating methods archaeologists use on prehistoric sites.

INTRODUCTION: Archaeologists use the term *absolute dating* to describe a specific date or date-range. This contrasts with relative dating in which materials are said to be older or younger than others, but no specific age of the remains is assigned.

ACTIVITIES: 1. Discuss the concept of absolute dating techniques.

2. Discuss four methods of absolute dating that archaeologists use:

a. Archaeomagnetic dating is a way of determining when fire hearths were used. Most soil contains some clay that is partially iron ore. When clay is heated, the grains of iron ore line up with the magnetic field of the earth. They remain in this position, even after the clay cools. The earth's magnetic field varies through time, and records of these changes can be compared with the alignment in an archaeological sample, to determine when it was heated. This means that, through archaeomagnetic dating, an archaeologist can tell when a prehistoric fireplace was used.

b. Dendrochronology is a way of finding out the age of wood at archaeological sites. Some trees grow rapidly at one time of the year. When a tree like this is cut down, the annual growth spurts can be seen as rings. The tree rings are then compared with charts that show patterns of rings from the present time back into prehistory. An expert can tell what year the tree was cut. Ordinarily,we assume the tree was used soon after it was cut.

c. Radiocarbon (Carbon 14) dating is a method for determining the age of organic remains. This technique is based on the principle that all living things contain carbon and a fraction of all carbon is a radioactive type, carbon 14. All plants and animals absorb carbon 14 while they are alive. After they die, the radiocarbon decays at a constant rate that can be measured. Although all substances that have been alive (wood, grass, bone, shells) can be radiocarbon dated, the ideal material is wood charcoal.

d. Thermoluminescence is a way of dating pottery. Naturally occurring radioactive materials in the clay give off radiation. Some of the electrons excited by this radiation become trapped in the pottery. When pottery found at an archaeological site is heated to a high temperature, these electrons return to their ground state, giving off light. The more light given off, the longer it has been since the pottery was last at a high temperature. This indicates when the pottery was made, since high temperature firing is part of pottery manufacturing.

Although these techniques are used to determine the age of an archaeological site, students should understand that these techniques are not perfect. Each process has many steps in which error can be introduced. In addition, the processes are still being refined.

3. List the following archaeological materials on the board. Ask students to decide which absolute dating technique can be used for each sample:

a. Wooden Roof Beam (dendrochronology or radiocarbon dating)

b. Woven Grass Mat (radiocarbon dating)

c. Pottery Figurine (thermoluminescence)

d. Prehistoric Fireplace that has no burned wood in it (archaeomagnetic dating)

e. Prehistoric Fireplace with large piece of burned wood and baked clay cooking balls in it (archaeomagnetic dating for the soil around the hearth, radiocarbon dating and possibly dendrochronology for the burned wood, and thermoluminescence for the baked clay cooking balls)

4. Discuss why an archaeologist might use several dating techniques at the same site. Each method has a certain margin of error. If more than one technique is used to determine the age of a single feature, the date will be more likely to be accurate. In addition, an archaeologist will need to use different techniques for different remains found at the site.

*Taken from Classroom Archaeology: An Archaeology Activity Guide for Teachers. Nancy W. Hawkins, Division of Archaeology, Baton Rouge, Louisiana, 1986.

Time Line*

GRADES: 4th through 6th

GOALS: To conceptualize the relatively long period of prehistory in Georgia, to recognize that the rate of change in cultures increases as the culture becomes more complex, to understand prehistory and history as a continuum of which they are a part, and to conduct independent and group research.

INTRODUCTION: Indians first came to the area at approximately 10,000 B.C. and have lived here ever since. As far as archaeologists can tell, changes occurred very gradually during the first few thousand years that people lived here. This slow rate of change indicates that the simple hunting and gathering way of life was probably a very effective way to live. As time passed, however, certain technological and social developments took place. Throughout the rest of the prehistoric period, there was a general trend toward increased complexity of society and more rapid changes in patterns of living. This same trend can be seen in Georgia in the past 200 years.

ACTIVITIES: 1. Discuss Georgia prehistory with the class. Frontiers in the Soil (see bibliography, Chapter III) is a good source to consult. If possible have a few copies of this cartoon-like book available to each group of students to consult when doing the following activities.

2. Take to class a roll of paper at least 12 feet long. You can use shelf paper, freezer paper, newsprint, or butcher paper. Decide on a scale to use for marking off units of time. For example, one foot might equal 1,000 years. If you have enough paper and wall space, you may want to allow one yard of paper for 1,000 years. This is the easiest proportion to use, and the length of paper allows plenty of room for illustration. Before attaching the paper to the wall, label it with dates from 10,000 B.C. to today, in 500-year intervals.

3. Using Frontiers in the Soil, or any other clear, concise book as a guide, assign tasks for illustrating the prehistoric period. A history textbook can be used for the time since Africans and Europeans arrived in Georgia. You may want to divide students into groups, assigning a cultural period (i.e., Paleo, Archaic, Woodland, Mississippian, Historic, Recent) to each group. The groups will then select major technological or cultural innovations to illustrate. For example, students might show when the first atlatl was used,

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when the first pottery was made, when the first corn was grown, and when the first Africans and Europeans arrived, when the first lunar landing occurred, when personal computers were developed, etc. Check the selected subjects before students proceed. Allow them to consult the reference books.

4. Decide whether you want students to draw or paint the illustrations on white paper, cut silhouettes out of construction paper, or use another technique. Assemble needed materials. After all illustrations are completed, supervise gluing these onto the time line. Double-check dates to be sure illustrations are placed appropriately on the time line.

5. Lead a discussion about the activity and the student's observations. Students may be surprised to see how long the prehistoric period is compared to the historic period, and how relatively recently many innovations occurred.

*Taken from Classroom Archaeology: An Archaeology Activity Guide for Teachers. Nancy W. Hawkins, Division of Archaeology, Baton Rouge, Louisiana, 1986.

The Shoot-Out*

GRADES: 4th and higher

GOALS: This archaeological activity is also a fun and interesting geometry lesson. The goals are to learn how to use a compass, what an archaeologist uses a compass for, to learn the geometry of a circle, to discover how a protractor works, and to understand that math is used in everyday life.

INTRODUCTION: The most important tool on an archaeological survey is a compass. Becoming proficient in its use takes a little practice. For best results use a liquid filled compass, which cost under $10. Since these lessons work best as small group activities, you will not need one for every student in the class, but rather, one for every student in the group participating at one time.

Begin the compass lesson with a classroom orientation on compass parts. Outside the building, have each student hold the compass flat in his or her hands, pointing straight ahead, at about chest level. The children and the compasses should move as units, so that their bodies will always be headed in the direction that the compasses are pointing. Students line up in a straight line and face their bodies so that the compasses and needles point North. Once oriented, each child can look straight ahead to see at what his or her needle is pointing. To walk a bearing, the student would walk toward the object, glancing from the object to the compass, making sure that he or she stayed on track. To walk South, have each student turn around, dial the rotating ring to South, so that the arrow points at 180 degrees. The 180 degree mark will line up with the center line on the base plate of the compass. Have the student walk back, trying to keep the North arrow inside of the direction of travel arrow. This process can be repeated in all directions or to specific degrees until the children are comfortable with the equipment.

ACTIVITIES: 1. Give each student a piece of paper, pencil, and a compass. Pair students up and scatter the pairs around you. Students stand back to back. On the word go, students take ten paces, turn and shoot the bearing of their partners by rotating the directional dial so that it matches over the north arrow. The bearing is read by looking at the number that is in line with the center line on the face plate of the compass. The number of degrees is written down by the students on the scrap paper along with their names and the names of their partners.

2. Back inside, after all students have had a chance to take a bearing, draw a circle on the board and roughly mark off degrees by 5 degree increments. A list of opposite bearings is also helpful to write out, i.e. 360 degrees – 180 degrees, 5 degrees – 185 degrees, etc. Each student checks his/her own accuracy by seeing how close the recorded number is to being exactly 180 degrees opposite his/her partner's.

3. At this point in the lesson, it is a good time to begin an introduction on the protractor. To avoid confusion, try using protractors that only number off clockwise and are a complete circle. If these are unavailable, black out the numbers that will not be used.

*Taken from "Archaeology for the Classroom" by Carol Ellick, in Archaeology and Public Education, Vol. 2, No. 1. Committee on Public Education, Society for American Archaeology.

The Bearing Straight*

GRADES: 4th and higher

GOALS: To understand and use a compass and protractor, to make and understand angles, to transform plotted numbers into a useful map.

INTRODUCTION: Archaeologists use a compass and graph paper to map a site, plotting the boundary, features, artifacts, and landmarks to tie it to reality. Maps made on archaeological surveys are used to relocate the sites, plot variation, and add information.

ACTIVITIES: 1. Outside: Students scatter in pairs. One student stands at the end of a 10-meter length of string, holding the compass, prepared to read a bearing. The partner moves, holding the other end of the string, taking the clipboard, graph paper, and pencil with him/her. The students, when requested to stop, hold their positions so that the compass reader can turn the rotating ring aligning the North needle inside the direction-of-travel arrow. The bearing is read at the point where the center line intersects the number on the rotating ring. The bearing is called out to the partner, who lists it as bearing 1 on the top of the graph paper. The pivoting student may also want to examine the compass to make sure that the bearing was correctly noted. The compass reader must maintain his/her spot for both bearings. This point will be labeled "O" when mapping begins. To find the second bearing, the students repeat the process of pivoting and recording.

2. Inside: A circular protractor with the degrees numbering clockwise is the easiest to use and to relate to the degrees on the compass. Students begin by plotting their datum "O", the point on which the student with the compass stood, in the center of the page. North will follow straight up from the O point. The first bearing is plotted by lining up the protractor and marking a dot at the appropriate degree point on the paper. Plot the distance, which was 10 meters. Using the metric ruler, have the students measure from O, laying the ruler on the point for the bearing a distance of 10 centimeters. The scale will be 1 centimeter equals 1 meter. Follow the same procedure to plot the second point, labelling each.

*Taken from "Archaeology for the Classroom" by Carol Ellick, in Archaeology and Public Education, Vol. 2 ,No. 2. Committee on Public Education, Society for American Archaeology.

Archaeology Words*

GRADES: 4th and higher

GOALS: To practice reading and spelling skills, and to review archaeological terms and their meanings.

INTRODUCTION: This exercise works best as a follow-up to previous archaeological exercise done by the students. After you write an archaeology term on the board, vertically, students will write related words horizontally, with each new word incorporating one of the letters in the original term.

ACTIVITIES: 1. Decide on a term and how closely related the horizontal words need to be. One example is shown below.

2. Be sure your students understand the meanings of all the words used. Example:

FEATURE
RECORDING
CULTURE
CHRONOLOGY
ARTIFACT
EXCAVATION
TROWEL
ANALYSIS
CONTEXT
MAPPING
STRATIGRAPHY

3. Other suggested words could include the names of the major cultural periods, such as Paleo, Archaic, Woodland, Mississippian, and Historic. The words radiating off of each vertical term would be some development relative to that cultural period.

*Taken from Classroom Archaeology: An Archaeology Activity Guide for Teachers. Nancy W. Hawkins, Division of Archaeology, Baton Rouge, Louisiana, 1986.

Clay Pottery Making*

GRADES: 1st through 6th

GOALS: To make older students aware of some geology fundamentals such as the origin of clays in Georgia, the chemistry of clay, and its many modern uses; to make students aware of the traditional Indian process of making pottery; to stimulate creativity during the artistic process.

INTRODUCTION: This may be used in conjunction with the "Pottery Reconstruction" exercise, or used alone.

ACTIVITIES: 1. For older students: Lead a discussion of clays naturally occurring in Georgia. If possible, bring in samples of as many as possible, such as the ubiquitous orange clay, the gray clays found along stream-beds, and the white kaolin clays of south Georgia (such as those mined by large industries today.) Allow the students to feel the different textures and note the various colors. Why are they different colors? (Aluminum silicate is the primary component of clay, and the colors of clays vary according to the amounts of other minerals present. Georgia clay is high in iron content causing its reddish, orange color.) Point out on a state map the general locations of each clay type.

2. Lead a discussion on what clay is used for today (antacids, toothpaste, cosmetics, etc.). Bring in some samples of these products and have the students look for clay in the ingredients listed on the package. (It will usually be listed as kaolin.) Clays are used in high-tech products also, such as the ceramic tiles on the space shuttle Columbia, which protect the vessel while landing.

3. Discuss why clay was important to the Indians (for cooking and storage vessels). Show slides or actual sherds of Indian pottery, noting the various shapes, temper, and decoration. Discuss why Indians fired pottery. (Firing, the process of rendering clay permanently hard through slow exposure to high temperatures, insures the permanence of clay pieces. As clays dry, they become gradually hardened, but will return to their natural state if immersed in water. Firing makes this reconstituting of clay impossible.) Demonstrate these principles by using three containers of water. In the first sprinkle in a little clay and stir. Allow the students to see that it dissolves. In the second, place a piece of clay that has hardened, and stir until it begins dissolving. In the third container, place a piece of fired pottery and stir. Remove the piece so the

students can see that it does not dissolve. Why would this firing clay be important to the Indians?

4. For younger and older students: Demonstrate making a pinch pot and attaching coils to change its shape. (This is done by starting with a small ball of clay. Stick your thumb into it and gradually enlarge the hole by pinching the clay between your thumb and fingers, until you have a hollow sphere. Coils of clay may be added to the shoulder and top of sphere to form and neck and rim of the vessel.)

5. Let each student make his/her own vessel. Allow younger students to emboss designs on the outside using paper clips, pencils, shells, hair rollers, or anything that will leave an interesting impression. Let older student try to recreate traditional Indian decorations by using cane or bamboo to press circles into the clay (archaeologists call this design "punctate"), a stick to scratch lines and designs into the damp clay (this is called "incised" pottery), or a cord wrapped around a fat stick and impressing the cord into the clay (archaeologists call this "cordmarked"). Students should also experiment with the rims of their vessels. Indians often "folded" the clay at the rim to the outside of the vessel, or "pinched" the rim as you would a pie-crust. Students may also make "effigy pots" by adding clay handles or designs that resemble living things, such as a frog. Indians often made effigy pots employing characters out of their myths or religion.

6. Let the clay harden (if you have used self-hardening clay), fire in the open with a wood fire, or fire it in a kiln is available. Be sure the clay is absolutely dry before firing!

*Adapted from Art and Culture of the Southeastern Indians: Rationale and Use in the School Curriculum, 2nd ed. Susan Power Rapp, Consultant. Published by Northeast Georgia CESA. 1982.

Pottery Reconstruction*

GRADES: 1st and higher

GOALS: To develop motor skills of students in lower grade levels, to identify and match corresponding shapes for students in lower grade levels, to create and study pottery, to participate in a common type of archaeological artifact analysis, and to understand why pottery is important to archaeologists.

INTRODUCTION: Archaeologists are very interested in studying pottery because it can often indicate how old a site is. Three pottery characteristics varied through time: shape, decoration, and temper. (Temper is the name archaeologists give to material mixed with the clay to make the pot stronger and less likely to crack. Various groups of prehistoric Indians used clay, shell, and sand as temper.) Experienced archaeologists can examine a piece of prehistoric pottery and tell, within a few hundred years, when it was made. This is usually a more precise date than other artifacts will give

The study of historic ceramics gives even more precise information. Archaeologists compare pieces of china found at an archaeological site with information in reference books to find out the place the ceramics were manufactured, the dates that they were made, and the relative cost of the ceramics. This helps archaeologists determine who lived at the site, when, how wealthy they were, and where they bought their household goods.

ACTIVITIES: 1. Discuss with the students the significance of pottery to archaeologists. Early people discovered that clay could be formed into pots and fired at high temperatures. These pottery containers were used for storing food and water and also for cooking. The process of firing the clay not only made the containers useful at the time, but also formed a material that survives for centuries at archaeological sites.

2. Have students plan what type of pottery they want to make. They can make prehistoric-type pots out of natural clay or clay bought from a handicraft shop. Try to find clay that will harden without firing unless your school has a kiln. Students can also buy, or bring from home, inexpensive dishes or flowerpots. These can be painted to resemble prehistoric or historic ceramics. Students may even draw pots on construction paper or cardboard. They may choose to duplicate designs of actual pieces found at archaeological sites or may want to create their own designs.

3. Each student should bring materials to make a pot along with a small paper bag. After the students make their pots, break or cut each one into pieces. Archaeologists rarely find all the pieces, so set a few sherds from each one aside and put these in a bag. Then for each pot, place the remaining pieces in a separate bag.

4. Randomly reassign the bags to students, checking to be sure that no one has the pieces he/she made. Encourage the students to examine the pieces and glue together any that fit. Then have each student estimate the total size of the ceramic piece, describe the process of manufacturing, and guess whether it is supposed to be from the present, past, or future. This information may be written or orally presented.

5. Mix together the remaining sherds. See if students can find the additional ones needed to complete their pots. They will be selecting the appropriate ones by examining color, type of decoration, construction material, and approximate size. These are the same things an archaeologist looks for when analyzing potter to determine age and origin. Discuss this observation with the students.

*Taken from Classroom Archaeology: An Archaeology Activity Guide for Teachers. Nancy W. Hawkins, Division of Archaeology, Baton Rouge, Louisiana, 1986.

Southeastern Indian Cooking*

GRADES: 3rd through 12th

GOALS: To demonstrate components of Indian diet, to illustrate the source of foods, to use math skills in measuring recipe ingredients and doubling recipes, and to practice reading skills.

INTRODUCTION: Southeastern Indians hunted black bear, deer, opossums, wild turkey, squirrels, and birds; built fish traps, or weirs, to capture fish; and collected shellfish. They harvested nuts, roots, and berries, including acorns, pecans, hickory nuts, sassafras, mint, yaupon holly, blackberries, wild strawberries, and persimmons. Wild foods were made into other useful ingredients, such as milk from hickory nuts and flour from acorns. The development of agriculture during the Woodland (1000 B.C.–A.D. 700) and Mississippian (A.D. 700–1540) periods led to fields of corn, beans, and squash.

ACTIVITIES: Students help prepare and sample traditional Indian dishes. This activity can be turned into a food festival extravaganza among several grade levels. (See Duke's section in Chapter I, which highlights an Indian food festival at one Georgia school. It used particularly authentic recipes and preparation methods.)

Discussion: What would the Indians have used in the place of modern ingredients? Did they have eggs, sugar, or milk? (They had no eggs, but used honey as a sugar and hickory milk instead of cow's milk.) How was their food different? (The lack of pesticides, enriched fertilizers, and hybrid seeds produced crops that would look unimpressive in today's high-tech agri-science (e.g., corn cobs were only a few inches long.) What cooking utensils would they have used? (Mano and metate stones for grinding, stone griddles, clay pots for mixing and cooking, stone or cane knives, and stone choppers.) What evidence of cooking activity might be left at a site for archaeologists to discover? (Cooking hearths consisting of charcoal, food bones, charred pottery, rocks discolored and cracked by the heat of the cooking fire, stone tools, pollen in the soil from certain plants, corn cobs, etc.)

RECIPES: The following recipes are adaptations of traditional Southeastern Indian dishes. Modern ingredients are substituted where it would not be practical to use the original items (bear grease, etc.). More authentic recipes may be obtained by writing Old Timey Products, Route 4, Box 951, Ft. Valley, GA 31030.

Hominy Soup (serves 8–10)

1/4 pound sliced salt pork
1 medium onion, peeled and sliced thin
2 (1 lb. 13 oz.) cans hominy
1 quart buttermilk
1/2 teaspoon pepper

1. Cook salt pork thoroughly and drain.
2. Add onion to the salt pork, and saute slowly.
3. Add the hominy. Heat gently for 5 min.
4. Add buttermilk, salt, and pepper. Heat very slowly for 5 min. Do not allow to simmer. Serve warm.

Corn Pone (serves 4)

1 cup corn meal
1/2 teaspoon salt
1 teaspoon baking powder
4 tablespoons bacon drippings
1/2 cup milk

1. Mix corn meal, salt, and baking powder. Stir in bacon drippings and milk.
2. Grease a large, heavy skillet with bacon drippings. Drop batter from a tablespoon and shape into 4 pones. Brown on both sides.

Sweet Potato Cake (makes fifteen 3" cakes)

4 large sweet potatoes
3 eggs
1 cup flour
1 1/2 teaspoons salt
1/8 teaspoon pepper
2 tablespoons cooking oil

1. Cook potatoes until tender; peel and mash.
2. Mix in the eggs, flour, salt, and pepper. Heat the oil on a large griddle until a drop sizzles. Drop the potato batter from a large spoon, and brown on both sides. As you turn the pancakes, flatten them slightly with a spatula. Add more oil to the griddle as needed. Serve hot.

Berry Corn Cobbler

1 qt. fresh strawberries (sliced) or blackberries,washed
3/4 cup sugar
1 cup corn meal
1 teaspoon baking powder
1 teaspoon salt
1/2 cup milk
2 tablespoons butter

Sauce:
1/4 cup honey
1 tablespoon melted butter/margarine
1 tablespoon lemon juice

1. Place berries in a 2-qt. baking dish, sprinkle with sugar.
2. In separate pan mix dry ingredients; quickly stir in milk and melted butter.
3. Drop tablespoons of batter on top of berries.
4. Mix lemon juice, honey, and butter.
5. Bake one hour at 375 degrees. Cool.

Leather Britches Beans

1 pound green beans (fresh)
2 quarts water
1/4 pound salt pork
2 teaspoons salt
1/8 teaspoon pepper

To Dry Beans (to preserve):
1. Clean beans and remove ends. String beans with a heavy thread.
2. Hang in a dry, sunny spot for 6–8 weeks until completely dry.
To Cook Beans:
1. Soak dried beans in water one hour.
2. Dice salt pork and add, with salt and pepper, to 2 quarts water and boil. Reduce heat and simmer for 2 to 3 hours. Serve hot.

*Nut Butter***

Dried Nuts (walnuts, hickory nuts, hazelnuts)
Maple syrup, honey, or cooking oil

1. Pound or chop 1/2 cup of nuts into a paste. Half a cup of chopped nuts will make about 1/4 cup of butter.

2. Add a few drops of oil, maple syrup, or honey as needed to make the mixture creamy.Serve the nut butter on bread or toast,or as a topping for cake or cookies, or mixed into recipes.

*Indian Corn and Nut Pudding***

3 tablespoons yellow corn meal
1 cup boiling water
2 teaspoons nut butter (see above)
2 tablespoons maple syrup or honey
2 large eggs beaten
1 1/2 cups corn kernels.
1/2 cup hickory nuts or walnuts, chopped

1. Mix cornmeal with boiling water in a bowl. Stir in nut butter and maple syrup or honey, beating it until it cools.
2. Beat in eggs, stirring them constantly so they do not harden. Add corn and nuts.
3. Pour the mixture into a buttered, 1 quart casserole and sprinkle with nuts on top
4. Bake 35-45 min. at 350 degrees. Serve warm.

*Toasted Pumpkin or Squash Seeds***

Pumpkin or squash seeds
oil
salt
mint or oregano

1. Remove seeds from the fruit and pull off the membranes. Wash and dry the seeds.
2. Spread the seeds on a baking sheet. (If using a campfire, a flat rock.) Sprinkle about 1 teaspoon cooking oil over the seeds.
3. Bake at 325 for 20 to 30 min. until seeds are dry and crisp. Remove from the oven and sprinkle with mint or oregano.

TRADITIONAL SOUTHEASTERN INDIAN FOODS***
(with Cherokee Indian words in parentheses)

FRUITS: Blackberries (ka-nu-ga-li), Huckleberries (Ka-wa-yaw), Strawberries (A-nu), Raspberries (Sv-di-wa-li), Elderberries (Go-ga-sa-ga), Wild Plum (Qua-nu-na-sti-ga), Wild Cherries (Ta-ya), Crab Apples (Sv-ga-ta Tsu-na-sdi-ga), Persimmon (Sa-li), Field Apricots (U-wa-go), Fall Grapes (Te-lv-la-di), Gooseberries (A-ya-lo-ti-sgi)

NUTS: Hickory Nuts (So-hi), Hazelnuts (Yu-gi-dv), Walnuts (Se-di), Butternuts (Go-hi)

DRINKS: Sumacade (Qua-lo-ga), Sassafras Tea (Ga-na-sda-tsi), Spicewood Tea (No-da-tsi)

BREADS: Chestnut Bread (Di-squa-ni), Bean Bread (Du-ya Di-su-yi-ga-du), Hominy Bread (Di-ga-nu-le-dv-ga-du), Wild Potato Bread (I-go-di A-ne-nu-na), Sweet Potato Bread (Nu-nv-a-su-yl-ga-du), Molasses Bread (Wa-du-li-si-ga-du)

MEATS: Roast Bear (Yo-na-a-wi-ya Sv-na-ta-nu-hi), Roast Deer (A-wi A-wi-ya Sv-na-ta-nu-hi), Speckled Trout (A-na-dv-tsi), Roast Bison (Ya-na-sa Sv-na-ta-nu-hi), Mushrooms (U-ni-lo-que), Raccoon (Gvi-li), Wild Turkey (Gv-na-ga-la-gi-na)

VEGETABLES: Potatoes (Nu-na), Corn (Se-lu), Hominy (A-ma-ge-i), Beans (Du-ya), Wild Greens (So-tsv-na), Pumpkin (I-ya), Succotash (Se-lu-du-ya-di-su-yi), Artichoke (Gv-tsi), Ramps (Wa-sdi)

TRADITIONAL HERBS AND THEIR USES***

Spignet (roots): backache; Rabbit Tobacco (leaves and stalks): colds; Red Alder (bark): high blood; Wild Cherry (bark): measles and colds; Beech Bark: vomiting; Peach Leaves: boils and risings; Boneset (leaves and stalks): pneumonia; Small Ragweed (leaves): poison oak or ivy; Goldenrod (leaves and stalks): consumption; Ratbane (leaves and stalks): typhoid fever; Elder (bark): heartburn; Ginseng (roots): colic; 12 O'Clock Weed (leaves): kills flies; Queen of the Meadow (leaves and roots): nausea; Christmas Fern (leaves or stems): fever; Ground Ivy (roots): hives; Yellow Root: sore throat/stomach trouble; Heat Leaves (entire plant): cold; Bull Nettle (roots): stop teething babies from slobbering.

*Taken from Art and Culture of the Southeastern Indians: Rationale and Use in the School Curriculum, 2nd ed. Susan Power Rapp, Consultant. Published by Northeast Georgia CESA. 1982.

**Taken from Dr. Charles Fairbanks Memorial Discovery Lab Teacher's Guide, Ocmulgee National Monument, National Parks Service.

***Taken from the Cherokee Indian Feast Program, Museum of the Cherokee Indian, Cherokee, North Carolina, 1949.

Food Preservation*

GRADES: 3rd and higher

GOALS: To understand preservation and decay at an archaeological site, and to consider American eating and packaging practices.

INTRODUCTION: When archaeologists excavate a site, they do not find remains of everything people ate because most food decays quickly. This is especially true in Georgia, where the moist, humid environment and acid soil destroys most organic materials. Archaeologists usually draw their conclusions after identifying fragments of bones, marine shells, nutshells, and seeds found in the refuse areas of the site. Historic archaeologists also use the types of dishes found to deduce diet. For instance, many slave sites and poor colonial settlements have a higher ratio of bowls to plates. This tells archaeologists that the inhabitants were eating inexpensive, long-lasting soups and stews in these bowls, instead of dining on large portions of meat in plates.

ACTIVITIES: 1. Discuss the preservation of food at archaeological sites.

2. Tell students that they are going to lists foods from three parts of American life that will survive under normal archaeological conditions until the year 3000. Divide the class into three groups. Assign each a menu for one of the following meals: a typical dinner at home, a meal at a fast-food hamburger restaurant, and a lunch at a school cafeteria. Have each group list which of the foods and containers will survive at a site.

3. After each group has completed its list, have a spokesman present the group's conclusions to the other students. Then lead a discussion about other remains (containers, cooking utensils, etc.) that will give information about food preferences and status. (School cafeteria trays might indicate mass-produced foods for many people, as indicated by the easily served and washed, stackable food trays. Fast-food containers may indicate that an individual had enough money to eat out instead of buying cheaper, uncooked food at a grocery store. Packages of instant foods or microwaveable meals may indicate that many family members work and are unable to spend time in food preparation, or they do not know how to cook or do not enjoy cooking.) Remind students that aluminum, ceramics, plastics, styrofoams, and glass survive a long time in the archaeological record, but paper and ink do not.

4. Discuss what this exercise teaches about archaeological sites of the past. Do archaeologists get a good idea of what people ate? Consider the changes in food preparation and food preferences through time. Can archaeologists ever be sure of all the foods people ate at any archaeological site? Discuss other types of remains that may not be completely preserved at an archaeological site. What about clothing and tools (made of wood, fiber, or bone) that might have been used 1,000 years ago? Would archaeologists find evidence of all of these? When an archaeologist excavates a site that is 5,000 or 10,000 years old and only finds stone points, what does this mean? Discuss the limitations of archaeology because of preservation.

*Adapted from Classroom Archaeology: An Archaeology Activity Guide for Teachers. Nancy W. Hawkins, Division of Archaeology, Baton Rouge, Louisiana, 1986.

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Interpret a Site*

GRADES: 7th through 12th

GOALS: To develop skills of reading, reasoning, observation, analysis, communication, and interpretation, and to introduce students to the basic concepts and methods of historical archaeology, including the interpretation of artifacts, features, associations, and written records.

INTRODUCTION: This activity is based on actual archaeological work conducted at New Ebenezer, Georgia, an eighteenth-century German town upstream from Savannah. Students will have the opportunity to analyze and interpret the archaeological data in the same manner as professional archaeologists.

ACTIVITIES: Students will be divided into three teams: the features team, the artifacts team, and the written records team. Each team will be given a certain portion of the information about the site, as revealed in the following worksheets. Each team will then interpret the information and share its conclusions with the class.

1. Review the material that follows: a *general introduction*, specific *information for each team*, and *conclusions drawn by the archaeologists* who studied the site. Think of this as the answer sheet. You will probably use these conclusions for reference only, to suggest alternative ways to interpret your students' findings.

2. Decide how many teams you will have and assign students to each team. The written records assignments are the most demanding, so you may want to consider this when choosing students for the teams. You may have a dozen or more teams, or you can reduce the number of teams by combining the artifacts team, the feature team, or the written records team.

3. Reproduce the assignment pages so that each student has a copy of his or her team's assignment.

4. Introduce the activity by giving each student a copy of the General Introduction and discussing it in class. Be sure they understand the term feature.

5. Pass out the work sheets and instruct students to write down their conclusions after studying the sheets.
6. Ask students to present their interpretations. Let the written

records teams go first, but ask the students to report only the artifacts and structures they expect to be at each area of the site, not the names of the areas of the site or how they were used. Then ask the features team to report, giving a description of each feature and the team's interpretation. Finally, the artifacts team should tell about the artifacts and their conclusions.

7. Next, have the written records team tell the names of each area of the site, when they were used, how they was used, and who used them. Then encourage students to review their conclusions about how the features and artifacts were used. (Use the Archaeologists' Conclusions as an answer key to help guide the discussion.)

8. Discuss with the students what they learned from only having part of the information about the site. It is hoped that this will help students to understand the complexity of archaeological interpretation. The Interpreting the Associations section should be particularly useful in this regard. A study is not based on artifacts, features, or written records and associations alone, but on a combination of these things. Students also need to recognize that the more complete the site is, the more complete the archaeologists' understanding of it can be. If construction or erosion destroys half the features, or if looters take half the artifacts, the site can be less well understood than if it has had limited disturbance through the years since it was occupied.

*Adapted from Can You Dig It? A Classroom Guide to South Carolina Archaeology. Nancy Hawkins, Stanley South, Tom Charles, and Margaret Walden. S.C. Dept. of Education/S.C. Institute of Archaeology and Anthropology. 1989. New Ebenezer, Georgia exercises developed by Rita Folse Elliott, LAMAR Institute.

GENERAL INTRODUCTION

The site we will be studying is an actual archaeological site in Georgia: New Ebenezer, located upstream from Savannah (Figure 11). New Ebenezer was settled in 1736 by persecuted Lutherans fleeing the Salzburg region in the Austrian Alps. The Salzburger settlers at New Ebenezer brought their German culture, language, and pietist religion with them, but little else in the way of material possessions. Several ship loads of Salzburgers came across the Atlantic between the 1730s and 1750s. They faced a strange new world in Georgia, full of exotic (to the Salzburgers) plants and animals, a hot and humid climate, foreign people, and incurable diseases. In spite of an incredibly high death rate, the Salzburgers managed to persevere in experimental agriculture, animal husbandry, craft trades, industry, and silk production (sericulture). The Salzburgers turned New Ebenezer into one of the most important cities in the fledgling colony of Georgia. Eventually the American Revolution brought war and disruption to the townspeople. By 1780 the inhabitants were dispersed and the town was falling into ruin. The only visible sign of the town's location today is the second church, built in 1767. All the houses and shops have long since fallen down and disappeared. While the town is not visible above ground, an enormous amount of information lies below the surface, to be excavated and deciphered by archaeologists.

Archaeologists have sampled the site, excavating only parts of it. From their study, they are able to discover many things about it. They found out what is was, where it was, who used it, how it was used, and when it was used. Imagine that you are one of the archaeologists who excavated here. You must now analyze the data you collected during excavation to formulate an interpretation of the events, people, and dates associated with the site.

The archaeologists combined data from written records, artifacts, and features, along with the association between them, to learn about the site. You are going to do this, too. You will be divided into teams, and each team will get certain information. Your team will try to draw conclusions about the site. Then everyone will share ideas to get a more complete picture of the site, what went on there, who was involved, and when it took place.

The *features team* will study features to discover information about specific areas of the site. Features are places where the soil color is different from the nearby soil because it has been disturbed

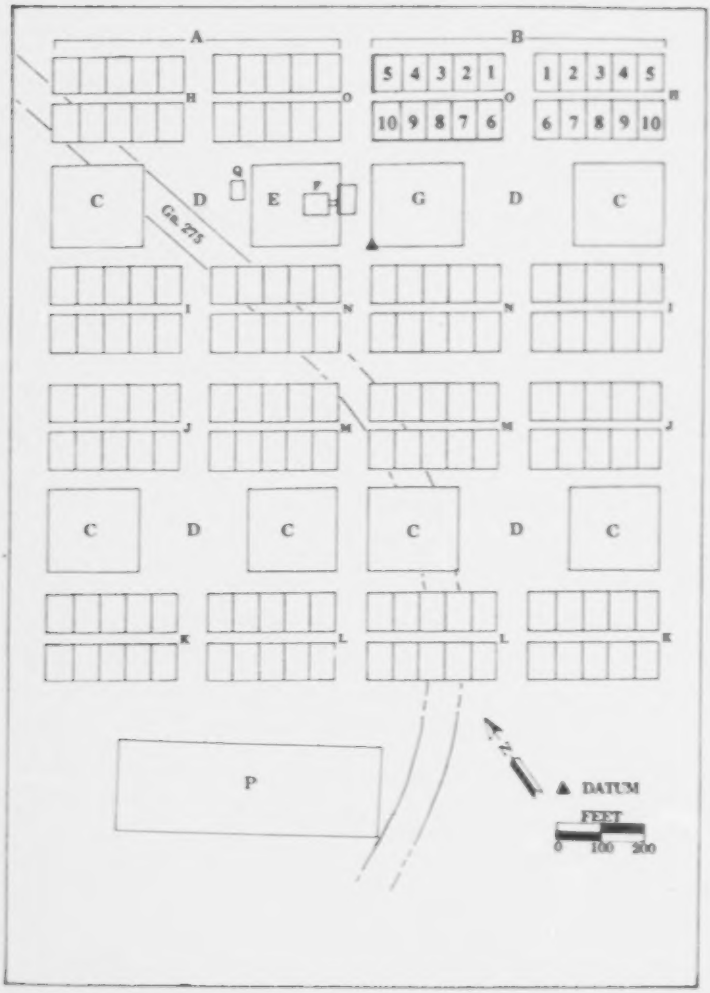

Figure 11. Reconstructed town plan of New Ebenezer. A, West Ward; B, East Ward; C, Public Square; D, Market Place; E, Church Lot; F, Church; G, Parsonage Lot; H, 1st Tything; I, 2nd Tything; J, 3rd Tything; K, 4th Tything; L, 5th Tything; M, 6th Tything, N, 7th Tything; O, 8th Tything; P, Cemetery; Q, Salzburger Museum; R., datum point (1000 North/ 1000 East).

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in the past by people. Postholes, ditches, and trash pits are examples of features. Groups of postholes often make a pattern such as a circle or rectangle, depending on the shape of the building they once supported. Postholes forming a line often represent a fence, and can tell archaeologists where lot boundaries had been.

Archaeologists draw maps of such features and take photographs and record artifacts found in and near features. From the shape of the feature and the artifacts found in it, you can figure out how a feature was used. For instance, an area with some bricks lying flat, with burned soil and ashes over them and a coin with a date of 1766 lying in the ashes, might be the remains of a fireplace dating sometime after the time the coin was made. If a coin is not present the archaeologist must determine a date from other objects such as glass, pottery, tobacco pipes, or other datable artifacts.

Written records give background information about the site. The *written records teams* will know exactly where the site is. By studying the history of the site these teams will find out the name of the site and when it was used, and will predict what should be found there. The *artifacts team* will have a list of the objects excavated from each feature. These teams will learn things about artifacts that other teams will not know about. Using your team's information you may come up with several ideas about how the features were used. After the teams discuss their conclusions, you will have a chance to change your interpretation. Then, you can compare your ideas with the conclusions made by the archaeologists. Remember that the individual features, artifacts, and building remains can only be fully understood in terms of their association with each other on a site.

Archaeological Methods at the Site: Archaeologists dug small holes or "shovel tests" every 60 feet across the entire site. They sifted all the soil from these holes through screen, saving all the artifacts. The location and types of artifacts found during this survey were plotted by a computer, allowing archaeologists to determine which portions of the site were used and should be investigated by archaeological excavation. Results of this survey led archaeologists to begin excavating larger holes. The archaeologists carefully excavated and sifted the soil from these larger holes. They took detailed notes, scientific samples, and photographs, and made many kinds of maps. They were careful to extract all the information available as they excavated. The following interpretation activity sheets are based on these portions of the site examined in greater detail by the archaeologists.

FEATURES TEAM #____
ASSIGNMENT SHEET 1

ARCHAEOLOGISTS' FINDINGS AT FEATURE 11

Archaeological survey revealed a high density of artifacts in this area. In addition, a slight depression in the ground surface led archaeologists to believe this to be the possible location of a feature. For these reasons, archaeologists began excavating this area and uncovered a large stain in the soil (Figure 12). They continued excavating until most of the stain was revealed. The stain ended abruptly on all four sides, creating four vertical sand "walls" going into the ground. Archaeologists excavated the different color soils until they reached the end of the stain, three feet below ground surface. The stain was full of thousands of eighteenth-century artifacts, including ceramics, shoe buckles, iron, slag (a by-product of blacksmithing), gunflints, gun parts, bottles, buttons, a few coins, burnt clay, nails, and metal. Following excavation, they drew this illustration which shows Feature 11 in "plan view" as if you were looking down on it. While excavating Feature 11, archaeologists uncovered several other features.

1. What other kinds of features did archaeologists discover while excavating Feature 11?

2. What features were found in the corners of Feature 11? Why were they there?

3. What covered the floor of Feature 11?

4. What are the dimensions of Feature 11 (in metric and English equivalents)?

5. A dripline is a small ditch made in soil when rain runs off a roof into the same spot. Eventually the dripline fills in with small artifacts and topsoil. What can this dripline tell you about Feature 11?

6. What is Feature 11?

7. Why was it filled in with trash?

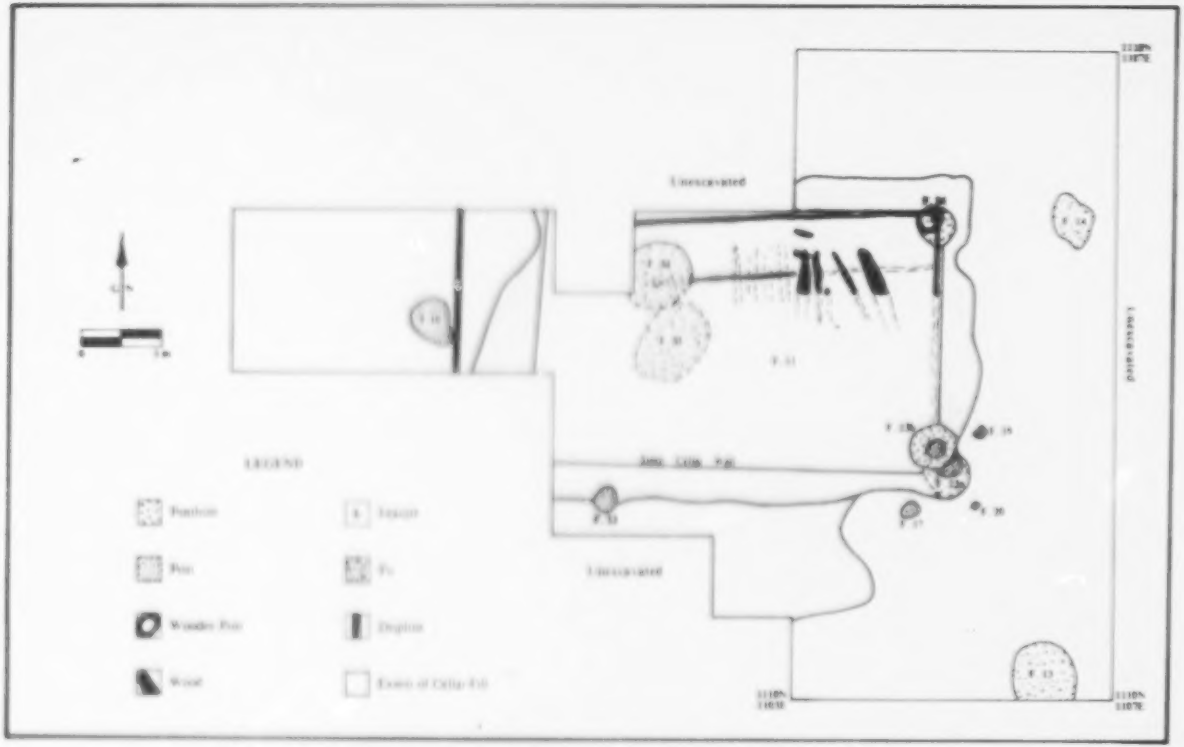

Figure 12. Plan of Feature 11 at New Ebenezer.

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FEATURES TEAM #____
ASSIGNMENT SHEET 2

ARCHAEOLOGISTS' FINDINGS AT FEATURE 8

Another area of the site investigated by archaeologists contained a circular soil stain designated as Feature 8. The center of the feature was a dark circle, surrounded by a lighter circular stain, and yet another, even lighter circular soil stain (Figure 13). Archaeologists excavated Feature 8 in sections, based on the soil color, and also in layers or levels. Excavation of the central circular stain was halted at a depth of almost five feet below ground surface due to the rising ground water within the feature. Excavation did reveal a large, upright, wooden beam in the central circle. Several fragments of iron barrel hoops were found nearby. Archaeologists recovered many artifacts from this feature including brick, nails, and ceramics.

1. What are the approximate dimensions of Feature 8 (in metric and English equivalents)?

2. What do you think such a large, circular, deep stain may represent?

3. Why did it have three different soil types in a circular pattern?

4. Why did it fill with water during the excavation?

5. Who do you think used this feature?

6. Why was it filled with trash?

7. How far would you have to excavate to reach the bottom of this feature?

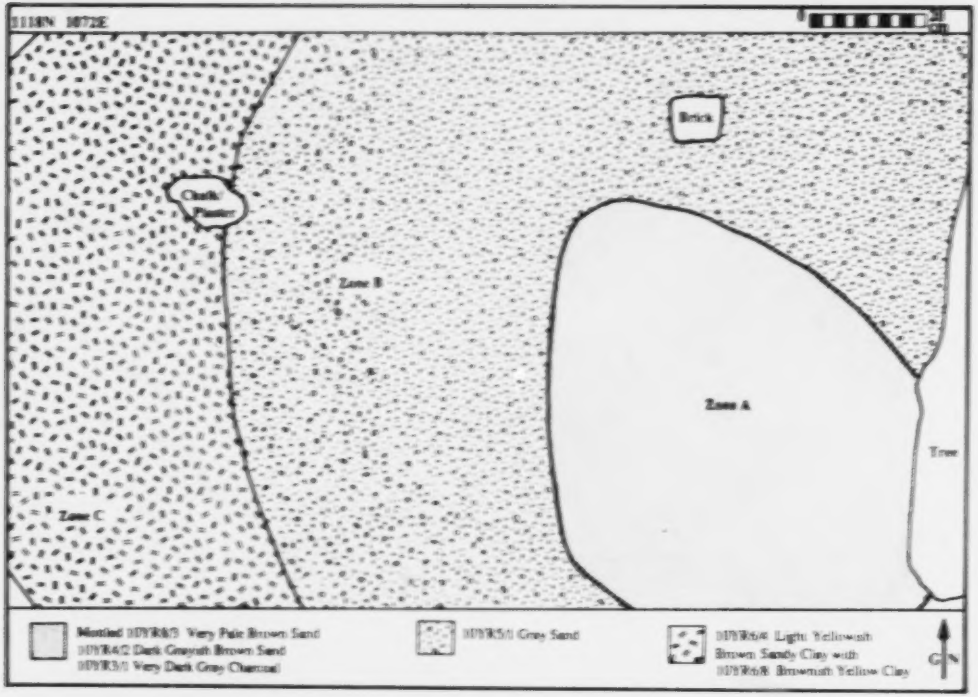

Figure 13. Plan view of Feature 8 at New Ebenezer.

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FEATURES TEAM #____
ASSIGNMENT SHEET 3

ARCHAEOLOGISTS' FINDINGS: FEATURES AT BLOCK F

- Archaeologists shifted their work to another area of the site where they excavated a unit they called Block F (Public Square C in East Ward, between First and Second Tythings on Figure 11). This block unit revealed several features, including two postholes (Features 29 and 31) and a pit (Feature 32) (Figure 14). Upon further excavation, Feature 30 was not really a feature but a natural soil strata. This block unit was distinctive because of the kinds, or types, of artifacts excavated from the features and the surrounding levels. Archaeologists found very few ceramics and household items. The majority of the artifacts were associated with architecture, such as brick, daub (clay used as mortar that hardens when exposed to heat), and nails.

1. Why is one of the postholes full of brick fragments?

2. Why does one post have two circles associated with it?

3. Why do you think few ceramics and household artifacts were in this area?

4. Why were many architectural artifacts found?

5. What do the artifact types (and lack of some types) tell you?

6. Generally, what type of structure or activity area could Block F represent?

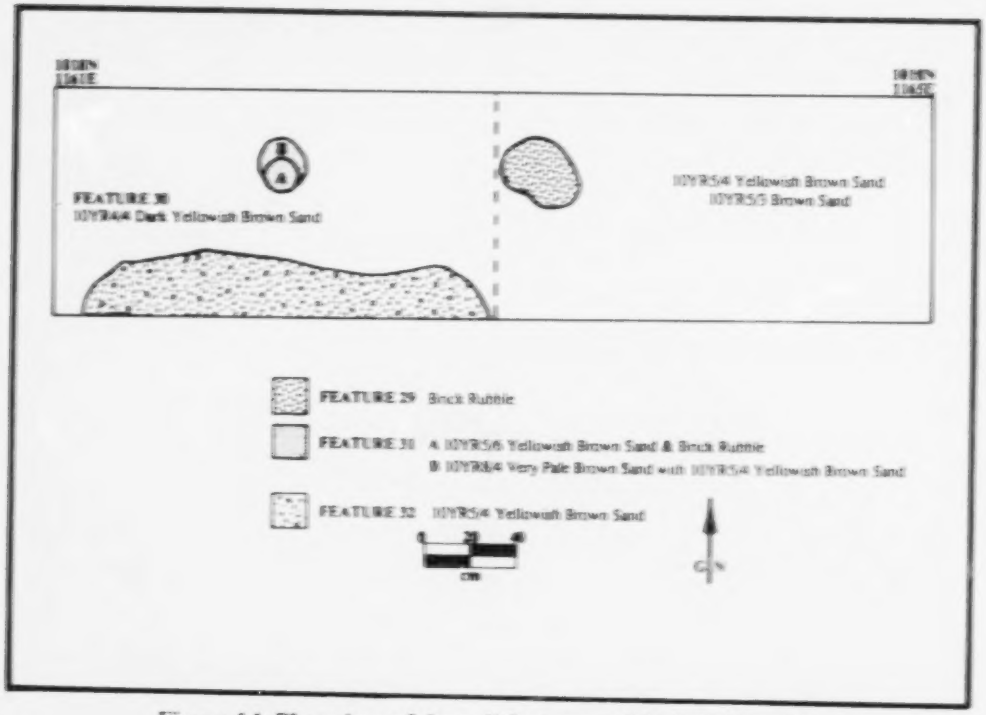
FEATURE 30
10YR4/4 Dark Yellowish Brown Sand
10YR5/4 Yellowish Brown Sand
10YR5/3 Brown Sand
FEATURE 29 Brick Rubble
FEATURE 31 A 10YR5/6 Yellowish Brown Sand & Brick Rubble
B 10YR8/4 Very Pale Brown Sand with 10YR5/4 Yellowish Brown Sand
FEATURE 32 10YR5/4 Yellowish Brown Sand
cm

Figure 14. Plan view of the soil features at Block F, New Ebenezer.

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FEATURES TEAM #____
ASSIGNMENT SHEET 4

INTERPRETING FEATURE ASSOCIATIONS

Features reveal a lot of information to archaeologists from their size, shape, and patterns or associations with other features.

	Feature 11	Feature 8	Block F
Number of Post Features	8	0	2
Arrangement of Posts	square, around feature	-	unclear
Number of Pit Features	4	0	1
Arrangement of Pits	2 in, 2 out of feature	-	near posts
Other Associated Features	dripline	none	none

1. Two posts, such as those associated with Block F, can always seem to "line up" and form a linear pattern. What should archaeologists do in order to accurately determine the "real" pattern of these posts?

2. What do you think the posts in Feature 11, arranged in a square, represent?

3. One corner of Feature 11 revealed evidence of five posts, two of which overlapped each other. What sort of activity does this represent? What does it mean when one feature "intrudes" or cuts into another feature? Which feature is older?

4. Two pits were discovered by archaeologists inside Feature 11. What does this tell you about the chronology of the pits and the Feature? Which was made first? What might be the function of the pits?

5. How does Feature 8 differ from Feature 11 and Block F? What does this mean in terms of explaining the three areas?

ARTIFACTS TEAM #_____
ASSIGNMENT SHEET 1

ARTIFACTS EXCAVATED FROM FEATURE 11

Artifact	Amount		Median Date
Kitchen			
Glass			
Table Glass	85		
Wine Bottle Glass*	406		
(*2 pieces have initials "R.S." scratched on them, see Figure 15.)			
Medicine Bottle Glass	93		
Ceramics:			
Blue Painted Delft	153		1750
Yellow Slipware	78		1733
Coarse Earthenware	880		not datable
Refined Agateware	54		1758
White Salt-Glazed Stoneware	172		1757.5
Total ceramics from Feature 11 (including some not listed here)	2036	mean date	1747
Architecture			
Window Glass	748		
Nails	681		
Arms			
Lead Shot	11		
Gunflint	20		
Clothing			
Buckles	9		
Buttons	23		
Hook & Eyes	11		
Glass Beads	5		
Tobacco			
Clay Smoking Pipes	608		
tobacco stem dating formula yields a date of			1756
Activities			
Miscellaneous hardware	12		
Iron Scrap	963		
Lead Scrap	15		

Brass Scrap	25	
Slag (by-product of blacksmithing)	811	
European Flint Rock Debris	40	
Personal		
Coin, Mexican, silver	1	1700-1732
Coin, British	1	1740-1754

1. Following an examination of the Activities group, what was the occupation of the person who used Feature 11?

2 Did the user of Feature 11 smoke and drink a lot? Why? What other uses might there have been for bottles in the 1700s?

3. For what purpose was Feature 11 used?

4. Based on the Ceramic and Tobacco Formula dates, when was Feature 11 used, or filled?

5. Based on the dates of the coins, what is the earliest date Feature 11 could have been filled? (This is called the Terminus Post Quem.) Why?

6. Do the coin dates mean that Feature 11 had to be filled in at this earliest date? Why?

7. Why do you think a Mexican coin was present at an eighteenth-century site in Georgia?

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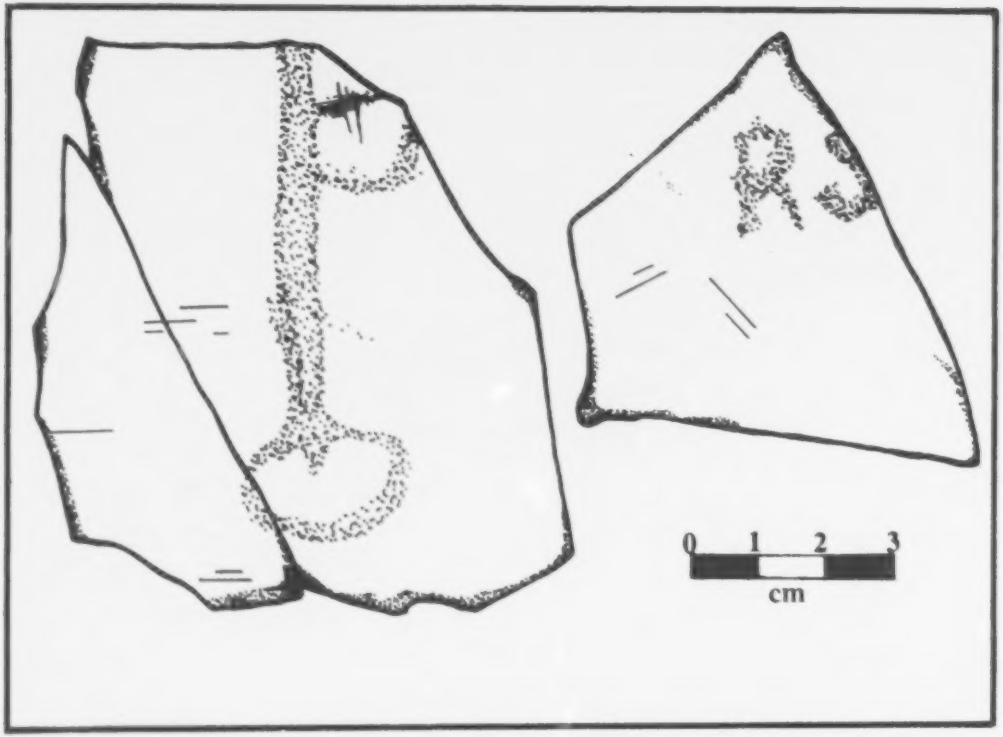

Figure 15. The eighteenth-century glass wine bottle with the initials "R.S.".

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ARTIFACTS TEAM #_____
ASSIGNMENT SHEET 2

ARTIFACTS EXCAVATED FROM FEATURE 8

Artifact	Amount		Median Date
Kitchen			
Glass			
Table Glass	5		
Wine Bottle Glass	169		
Medicine Bottle Glass	6		
Ceramics:			
Blue Painted Delft	2		1750
Yellow Slipware	5		1733
Coarse Earthenware (Utilitarian)	133		not datable
White Salt-Glazed Stoneware	13		1757
Blue Painted Pearlware	4		1797
Total ceramics from Feature 8 (including some not listed here)	225	mean date	1760
Architecture			
Window Glass	143		
Nails	206		
Arms			
Lead Shot	0		
Gunflints	1		
Clothing			
Buckles	1		
Buttons	1		
Hook & Eyes	0		
Glass Beads	0		
Tobacco			
Clay Smoking Pipes	21		
too few to use tobacco stem dating formula			
Activities			
Miscellaneous hardware	0		
Iron Scrap	204		
Lead Scrap	0		
Brass Scrap	1		

Slag (by-product of blacksmithing)	0
European Flint Rock Debris	0
Iron Barrel Straps	6

Personal

Slate Pencil	1

1. Can the occupation of the person using Feature 8 be determined through the artifacts?

2. What type of ceramics were most common in Feature 8? What might this tell you about the wealth or status of the person using the Feature?

3. Can the feature's function be determined through the artifacts?

4. Archaeologists did not find artifacts of many of the above categories from Feature 8. What can be inferred from the lack of artifacts, or this negative evidence?

5. Why and how was the feature filled?

6. Why do you think iron straps from wooden barrels were excavated from Feature 8?

7. If the barrels were part of the feature, and not just another discarded artifact, how might they be associated with the feature?

ARTIFACTS TEAM #_____
ASSIGNMENT SHEET 3

ARTIFACTS EXCAVATED FROM BLOCK F

Artifact	Amount	Median Date
Kitchen		
Glass		
Table Glass	1	
Wine Bottle Glass	6	
Medicine Bottle Glass	1	
Ceramics		
Blue Painted Delft	0	
Yellow Slipware	4	
Coarse Earthenware (Utilitarian)	22	
White Salt-Glazed Stoneware	2	
Gray Salt Glazed Stoneware	1	
Total ceramics from Block F (including some not listed here)	39–too few for dating formula	
Architecture		
Window Glass	3	
Nails	7	
Daub (burnt clay from structure)	2978	
Arms		
Lead Shot	0	
Gunflints	0	
Clothing		
Buckles	0	
Buttons	0	
Hook & Eyes	0	
Glass Beads	0	
Tobacco		
Clay Smoking Pipes	5	
too few to use tobacco stem dating formula		
ACTIVITIES		
Miscellaneous hardware	0	
Iron Scrap	2	
Lead Scrap	0	

Brass Scrap	0
Slag (by-product of blacksmithing)	2
European Flint Rock Debris	1

1. Daub is clay that has been used in construction, either as chinking in walls between wood or brick, or in chimneys between bricks, or in the place of brick. What does such a large amount of daub tell you?

2. What does the recovery of only three pieces of window glass indicate? Why does this evidence initially seem incompatible with the evidence in question #1?

3. Often the lack of certain artifacts can provide archaeologists with information. This is called negative evidence. What does the lack of large amounts of ceramics and kitchen refuse tell you about Block F?

4. What are some things for which Block F might have been used?

5. What are some things for which Block F probably was not used?

6. Can you infer anything from the lack of personal items excavated from this area?

7. Can you infer anything from the small amount of tobacco pipes found there by archaeologists?

ARTIFACTS TEAM #_____
ASSIGNMENT SHEET 4

INTERPRETING ARTIFACT ASSOCIATIONS

In the lab archaeologists count artifacts, compare types and amounts of artifacts from different areas of a site, and compare them to different sites in the region. The interpretations they then make from these comparisons help give a more complete picture of history at their site, in their region, and in the country as a whole.

When comparing artifacts from different areas, remember that not all areas were excavated to the same degree. Differences in numbers of artifacts are partly due to different amounts of digging. In spite of this, you can still see real similarities and contrasts.

Artifact Group	Feature 11	Feature 8	Block F
Architecture	4073	2885	3004
Window Glass	748	143	3
Ceramics	2040	221	39
Arms	32	2	0
Area Excavated (sq. meters)	48	10	4

1. Block F is the area with the least amount of excavation, yet it has more architectural artifacts than Feature 8 and almost as many as Feature 11. What can this tell you about the structure in Block F as compared to those structures associated with the other features?

2. In spite of the huge amount of architectural artifacts in Block F, it yielded only 3 window glass fragments. Feature 8, which had fewer architectural artifacts, had 140 times more window glass, while Feature 11 had 745 times more. What might you infer about the windows of the structures associated with each area?

3. Feature 11 has more ceramics than Feature 8, which has more than Block F. Is this purely the result of larger excavations in Features 8 and 11? What might it be able to tell you about how each area was used, for what kinds of activities?

4. How can you use math to determine the expected ratios of ceramics to meters excavated? Can you do the same for the arms per square meter ratio?

WRITTEN RECORDS TEAM #_____
ASSIGNMENT SHEET 1

WRITTEN RECORDS OF FEATURE 11

Imagine that you are an archaeologist excavating portions of the town of New Ebenezer, Georgia. You have been excavating a feature you named Feature 11. Old maps tell you that you are excavating in a part of the town called the Eighth Tything, but you still are not sure exactly whose town lot you are digging on within that Tything. You seek out the historical records and documents from the 1700s in hopes of discovering more information.

Other old maps indicate that you may be digging on Lot 1 of the Eighth Tything (Figure 11). Records show that Lot 1 was originally granted to Adam Riedelsperger, a wooden shoe maker, in March of 1736. Adam built a hut, kitchen, stables, and garden fence before his death nine months later. Adam's widow gave the land to Thomas Bichler in 1737.

Thomas lived on the lot, but by 1739 apparently moved to an outlying plantation to run a mill. After moving, he became a tavern keeper, constable, and saddle maker. Sometime prior to his death in 1751 (probably in 1750), he sold his town lot to Rupert Schrempff.

Rupert was a skilled blacksmith, locksmith, and gunsmith. New Ebenezer's preacher says Rupert was "a skillful and industrious worker; and because he can make all sorts of things, there is always enough work for him...he can get no black sheet iron in either Savannah or Charleston and... is required to disassemble old hoes and pans and hammer the plate when he needs it." Rupert made many tools while blacksmithing until his death in 1753. He was not much older than 30 years.

Rupert's oldest son, Frederick Schrempff, received the lot in 1759 and did not live there after the Revolutionary War. He may not have lived there long after 1759, since he also owned a lot in another nearby town.

1. Based on the historical information, who lived on Lot 1 the longest? Who lived on it the second longest time?

2. What occupant participated in the most activity on Lot 1, according to the historical record?

3. What types of artifacts would these activities to produce?

4. Which lot owner do you think is associated with Feature 11? Why?

WRITTEN RECORDS TEAM #_____
ASSIGNMENT SHEET 2

WRITTEN RECORDS OF FEATURE 8

Imagine that you are an archaeologist excavating portions of the town of New Ebenezer, Georgia. You have been excavating a feature you named Feature 8. Old maps tell you that you are excavating in a part of the town called the Eighth Tything, but you still are not sure exactly whose town lot you are digging on within that Tything. You seek out the historical records and documents from the 1700s in hopes of discovering some information.

An old map of the town indicates that the area you are excavating may be part of Lot 3, in the Eighth Tything (Figure 11). You decide to trace the chain of title, that is, to locate all the property deeds for all the people who ever owned that lot. Lot 3 probably was occupied between 1736 to 1750, although the historical records of this ownership did not survive. The courthouse did record a deed for Lot 3 in 1757 when a man named Nicholas Kronberger was granted the property that he had claimed in 1755.

Nicholas did not settle at New Ebenezer when he first arrived in Georgia. Instead, he lived across the Savannah River at a settlement in South Carolina. Nicholas and his wife moved from there to New Ebenezer sometime in the 1750s. He was officially granted Lot 3 in 1757, at which time he had three children. It is most likely that Nicholas was a farmer. His extensive land holdings consisted mostly of river swamp around New Ebenezer. Nicholas Kronberger and his family do not appear in the deed records of Lot 3 following the American Revolution. There is no record of what happened to the Kronbergers during and after the war.

The next historical mention of Lot 3 was a deed dated 1793. The lot was regranted to Thomas Wylly. Thomas was not a Salzburger or German, as most of the New Ebenezer inhabitants had been before the American Revolution. He was granted several other abandoned or unclaimed town lots at this time, in addition to Lot 3. Thomas owned a plantation at another community near New Ebenezer, and probably never lived on Lot 3 but held it in hopes of selling it for a large profit some day.

1. You found no historical deeds for Lot 3 prior to 1755, even though this lot was in a prime location near the river. Does this mean no one owned it during this period? Why or why not?

2. What kinds of artifacts would you expect to find from Nicholas

and his family's occupation of Lot 3?

3. Would you expect to find many artifacts, or just a few? What status do you think the artifacts would reflect?

4. Based on the information from the historical records, why is it difficult to determine where Thomas lived? How can archaeology help?

5. If you did find evidence that Thomas lived on Lot 3, how could you determine the difference between the artifacts left by him and those left by the Kronberger family? Would there be differences in the date range of the artifacts, economic status, or ethnic background? Explain.

WRITTEN RECORDS TEAM #_____
ASSIGNMENT SHEET 3

WRITTEN RECORDS OF BLOCK F

Imagine that you are an archaeologist excavating portions of the town of New Ebenezer, Georgia. You have been excavating an area you named Block F. Old maps tell you that you are excavating in one of the town squares (Figure 11). Records indicate that this particular town square contained two buildings, a storehouse and a silk filature (building used for rearing silkworms and making silk thread). Unfortunately, the town square is large and the maps do not indicate where in the square the buildings are located. While excavating Block F you realize you have located remnants of one of the buildings. You double-check the historical records.

In 1752, the preacher at New Ebenezer wrote this description of the newly constructed silk filature:

> It stands on a large market place across from the parsonage on the other side of the street....[It] is 42 feet long, 22 feet wide, and 26 feet 3 inches high. It is built of durable pine wood...with an imposing and firm roof of cypress shingles. It has two floor and two stairs...it has 18 windows...two chimneys...and eight [copper] kettles. Every window is provided with a window frame covered with canvas so that the too strong wind and sunlight can be held off. Where the kettles stand there is masonry from one wall to the other. The house itself stands on a stone foundation. The chimneys have been built outside of the house...Before the house, immediately opposite the door yet several feet from it, a well has been dug, which is twenty-one feet deep and six feet in diameter and has been lined and protected from the bottom to the top with thickly sawed and durable cypress wood like a large barrel.

Your archaeological investigations revealed two brick scatters approximately 13 meters apart (1 meter = 39.37 inches). Excavations uncovered two posts and one pit feature. Ceramics, bottles, and household artifacts were few. Only three small pieces of window glass were excavated, although brick and daub (baked clay used in construction) were very common.

1. Do you think your excavations uncovered the storehouse or the silk filature? Why?

2. What do the brick scatters indicate?

3. What do the few window glass fragments tell you?

4. What parts of the structure would you expect to find in the ground today? What would you not expect to find?

5. What types of artifacts would you expect to excavate from a colonial storehouse? What artifacts would you find during the excavation of a silk filature?

ARCHAEOLOGISTS' CONCLUSIONS: FEATURE 11

Almost total excavation of Feature 11 proved it to be a cellar. The supporting posts in the corners (at least two of which were replaced historically due to rotting and termites), the vertical soil stain, and the floor boards laid on the floor indicate a cellar dug into the sand. No brick or wood was used on the walls. The clay and loosely laid floor boards at the bottom of the cellar indicate that the users had problems with water seepage and groundwater flooding.

Schrempff and his family filled in the cellar between 1750–1753, when they lived here. The frequent flooding of the cellar probably led them to fill it in with trash and other debris such as food bones. While the cellar was filled in between 1750-1753, as indicated by the dates of certain ceramics and other artifacts, it may have been built by a previous land owner. If built prior to 1749, few artifacts from the earlier occupants were discarded into the cellar. Some of the artifacts dating later than 1753 may be the result of intrusive features, or postholes and pits dug into the top of the cellar by later lot owner. The more recent artifacts associated with these later owners would have gotten into these holes.

The time range and types of certain artifacts help date the cellar. The layers of slag throughout the cellar fill indicate that Rupert was responsible for filling it. Slag, a by-product of blacksmithing, raw metal, iron objects, nails, hardware, gun parts, and gunflints all indicate materials used or made by Rupert the blacksmith, locksmith, and gunsmith. Even more definitive evidence was the wine bottle scratched with Rupert's initials "R.S." and his symbol, a picture of a key. Bottles were valuable at New Ebenezer and were recycled and used to store a variety of items. Often they took the place of more expensive ceramics. Rupert used bottles to hold lead shot, and probably many other things.

Rupert was fairly well-to-do by New Ebenezer standards. He had many ceramics, including expensive porcelains; he had fancy goblets. Coins were rare at New Ebenezer, yet Rupert accidentally threw away several in the trash pile in his cellar. Georgia did not have its own currency at this time. England encouraged colonists to trade for coins of other nations, to bring more gold and silver into the country. The silver coin minted in Mexico may have belonged to the Spanish living in Florida and eventually through various exchanges, made its way into the blacksmith's possession.

The dripline tells archaeologists the location of the roof of the structure associated with the cellar, whether the cellar occupied the entire area under the structure, and ultimately, the dimensions of the structure.

ARCHAEOLOGISTS' CONCLUSIONS: FEATURE 8

Archaeologists found Feature 8 to be a hand-dug well. The inner zone was the actual well shaft and the outer zones were the construction pits. Excavating these two zones separately allowed archaeologists to determine when the well was dug, based on the artifacts found within the construction pits; and when the well was filled with trash, based on the artifacts excavated from the well shaft.

Artifacts reveal that the well was built and filled in during the eighteenth century. Archaeologists excavated blue hand painted pearlware in both the construction pit and well shaft, both dating to shortly after 1774. It may be assumed that Nicholas Kronberger was responsible for the construction of the well, since he owned the property from 1750 until 1776. While Nicholas had many landholdings, it is likely that either he lived on this lot or rented it to someone, given the presence of a well. The well was filled in by 1800, possibly before Thomas Wylly was granted the property in 1793. It is possible that immediately after receiving the lot Thomas filled in the well with debris from the previous occupant lying around the lot, because most of the artifacts in the well date prior to Thomas' ownership.

Archaeologists can learn a lot about well construction from the partial excavation of Feature 8. Apparently Nicholas dug a larger hole than he needed for the well (the construction pit). This was necessary because the well had to be dug very deeply by hand, and a small hole at the top would not allow the well diggers to get very far below the surface. After Nicholas and his helpers dug the well as deep as necessary, they lined the center hole (the well shaft) with cypress boards and barrels to keep the sandy walls from collapsing back into the hole. The water at the bottom of Feature 8 helped preserve this cypress wood for over 200 years, after which time archaeologists found it.

Nicholas or Thomas must have decided to fill in the well when it was no longer being used or no longer functioning. The dangerous hole was filled with broken dishes, brick fragments, and other trash needing disposal.

Historical records indicate that wells at New Ebenezer frequently were dug to 25 feet below ground. Archaeologists can continue excavating Feature 8 only if water pumps and safety equipment are used.

ARCHAEOLOGISTS' CONCLUSIONS: BLOCK F

Archaeologists believe they have discovered the silk filature. The two brick piles indicate substantial brick chimneys. Bricks were fairly rare in town and most of the colonists at Ebenezer had mud and stick chimneys. The brick piles are approximately 42 feet apart, or the distance of the two chimneys mentioned in the historical record of the filature. In addition to this evidence, few excavated artifacts were household-related while the majority indicate an industrial site with a substantial structure. The historical records depict the filature windows as having canvas covers instead of glass panes. This is supported by the excavation of only three pieces of window glass, instead of the large amounts found in Features 11 and 8. These three pieces could have been the result of later plowing in the nineteenth and twentieth centuries, which would have dragged some artifacts in the upper soil zone around the site.

Further excavation at the silk filature area should produce the building's foundation, the well, and the fence line. Additional excavation will uncover many more artifacts, including some of the tools used by the people of New Ebenezer to raise silkworms and make silk.

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INTERPRETING THE ASSOCIATIONS

The town of New Ebenezer was laid out like the town of Savannah, Georgia, with several town squares and market areas surrounded by several series of house lots arranged into groups, or Tythings. New Ebenezer bordered on the Savannah River, where a variety of large river boats and small vessels used the waterway as a highway for transporting goods and people. While the original town plan contained many lots, some never were occupied. Rupert Schrempff's cellar and Nicholas Kronberger's well were on neighboring lots next to the river in the Eighth Tything. The Silk Filature was in a town square to the south and east of their lots.

The artifacts associated with Rupert's well indicate that he was a financial success within the town. His skill in blacksmithing, gunsmithing, and locksmithing provided him with a steady income. Analysis of his trash, or the artifacts he threw away in the cellar, reveal some expensive items such as a silver coin, fancy drinking goblets, imported porcelain, and other imported ceramics. Nicholas Kronberger's debris in the well indicate that he did not fair too poorly in town, either. When comparing both Rupert's and Nicholas' artifacts to inhabitants of other colonial sites, however, both would have been considered relatively poor. Their status within New Ebenezer was quite different than their status would have been in places like Savannah and Charleston, South Carolina.

Dates obtained from historical records, artifacts, and features indicate that the town declined during the American Revolution. Frequent occupation by opposing British and American forces damaged much of the town. Military occupation also drove inhabitants away, forcing many to flee to safer towns or the outlying countryside where many of them remained even after the war ended. The abandonment of many of the house lots, the loss of skilled craftspeople and laborers, and the physical damage of the war resulted in the demise and eventual end of the town of New Ebenezer.

Chapter III: Bibliographic and Curriculum Materials

INTRODUCTION

The following guide is a fairly exhaustive list of sources that provide the educator with background information concerning archaeology, along with the chronology and currently accepted data on the various periods of prehistory. The list of sources also contains materials suitable for students in first grade through high school. Every effort has been made to determine the most current location (i.e. address, phone number, etc.) for each source.

The sources are annotated and arranged by category: books (fiction or non-fiction), booklets, magazines, posters, audio tapes, video tapes, films, games, newsletters, brochures, curriculum materials, artifact replicas, archaeological societies, field work opportunities, non-museum exhibits and displays, and museums.

BOOKS

Fiction (for classroom use), Junior High and High School

Rockwood, Joyce. 1978. *Groundhog's Horse.* An eleven year-old Cherokee sets off on a one-boy raid of a Creek town to rescue his unusual horse. Holt, Rhinehart, Winston. (UGA/CCE Workshop)

Rockwood, Joyce. 1975. *Long Man's Song.* A young Cherokee living in the southern Appalachian mountains proves himself as a medicine man while trying to cure his sister's illness. Holt, Rhinehart, Winston. (UGA/CCE Workshop)

Rockwood, Joyce. 1976. *To Spoil the Sun.* Forewarned by omens, an Indian village is struck by an "invisible fire" which actually is smallpox brought to America by European explorers. Holt, Rhinehart, Winston. (UGA/CCE Workshop)

Searcy, Margaret Zehmer. 1974. *Ikwa of the Temple Mounds.* Tells a delightful story about a Mississippian Indian girl who lived 800 years ago in a temple mound community. Through the story, the daily life of prehistoric Indians is described. University of Alabama. (UGA/CCE Workshop)

Search, Margaret Zehmer. 1981. *The Charm of the Bear Claw*

Necklace. Depicts the Indians living in the Southeast during the Archaic times. (UGA/CCE Workshop)

Speerstra, Karen. 1980. *The Earthshakers.*Naturegraph. (UGA/CCE Workshop)

Non-Fiction

The American Indian, Special Edition for Young Readers. LaFarge, Oliver. 1960. Golden Press, New York. Gives a short prehistory overview before concentrating on Indians after European contact. The Southeastern Indian section is brief, but well illustrated. Useful for secondary grades. (SC Classroom Guide)

Archaeology: An Introduction. Meighan, Clement W. 1966.. Chandler Publishing Co., San Francisco, California.

Archaeology: Secrets of the Past. Evans, Eva Knox. 1961. Golden Press, New York, NY.

The Art of the Southeastern Indians. Glubok, Shirley. 1978. MacMillan, New York. The art and history of many southeastern Indian groups from 5000 B.C. to the present are well illustrated. For intermediate and secondary grades. (SC Classroom Guide)

Calendars to the Past; How Science Dates Archaeological Ruins. Baldwin, Gordon C. 1967. Norton, New York. Clearly explains how archaeologists date sites with information from other disciplines. Secondary grades. (SC Classroom Guide)

Carbon 14 and Other Science Methods that Date the Past. Poole, Lynn, and Gray Poole. 1961. McGraw-Hill, New York. Explains various types of dating used in archaeology, and why and how they work.Intermediate and secondary grades. (SC Classroom Guide)

Cherokee Legends and the Trail of Tears. Adapted by Underwood, Thomas Bryan. 1979. Cherokee Publications, Cherokee, NC.

The Cherokees Past and Present.. Sharpe, J., ed. 1970. Cherokee Publications, Cherokee, NC.

Clues to America's Past. National Geographic Society. 1976. National Geographic Society, Washington, DC. Excavations and stories take the reader on a journey through American archaeology.

The third chapter examines the lower Mississippi Valley during European contact, as told through eye-witness accounts. Targeted for secondary grades through adult. (SC Classroom Guide)

Exploring Prehistoric Alabama through Archaeology. Wimberly, Christine Adcock. 1980. Explorer Books, Birmingham, AL. Similar to Roy Dickens' book, this cartoon-illustrated text captures the attention of students. Its easily understood concepts appeal to the older novice, as well. The title specifies Alabama prehistory, but the book is a synopsis of general Southeastern prehistory and can be adapted quite well to Georgia studies.

A Field Guide to Conservation Archaeology in North America. McHargue, Georgess, and Michael Roberts. 1977. J.B. Lippencott, Philadelphia. The authors examine ways in which the lay public can learn about archaeology and actually participate in it. For secondary students and adults. (SC Classroom Guide)

Field Methods in Archaeology, 6th edition. Hester, Thomas R., Robert F. Heizer, and John A. Graham. 1975. Mayfield Publishing, Palo Alto, CA. Describes the techniques used in archaeological investigations. For secondary students and adults.

The First American: A Story of North American Archaeology. Ceram, C.W. 1971. Harcourt, Brace, Jovanovich, New York. Details archaeology on the continent, including history, technique, and theory, and describes important prehistoric developments and eastern Indian mounds. Suitable for secondary students and adults. (SC Classroom Guide)

Frontiers in the Soil. Dickens, Roy S., Jr., and James L. McKinley. 1979. Frontiers Publishing Company, P.O. Box 3474, La Grange, GA 30241. This paper-back book is illustrated with colorful cartoons. The non-technical text explains Georgia's prehistory and history, while describing the role and duties of archaeologists. For grades 5 through adult. (NPS Newsletter)

Games of North American Indians. Culin, Stewart. 1975. Dover Publications, New York. Originally published in 1907, this book describes the traditional games played by American Indians. Suitable for secondary grades and adults. (SC Classroom Guide)

Historical Archaeology, A Comprehensive Guide. Hume, Ivor Noel. 1987. Alfred A. Knopf, Inc., New York, NY. Details techniques applied to historical archaeology. Informative for adults.

A History of the Creek Indians, The Road to Disappearance. Debo, Angie. 1979. University of Oklahoma Press, Norman.

Indian Harvests. Grimm, William C. 1973. McGraw-Hill, New York. How Indians used native plants such as cattails, milkweed, and persimmons. For intermediate and secondary audiences. (SC Classroom Guide)

The Indian Heritage of America. Josephy, Alvin M., Jr. 1976. Bantam Book Publishers, New York, NY.

Indians of the Southeast: Then and Now. Burt, Jesse, and Robert Ferguson. 1973. Abingdon Press, New York. Secondary grades.

In Small Things Forgotten. Deetz, James. 1977. Doubleday, New York, NY. This classic book introduces the reader to historic archaeology. Suitable for grades 8–adult.

Invitation to Archaeology. Deetz, James. 1967. The Natural History Press, New York, NY. The discipline of prehistoric archaeology in understandable terms. Eighth grade through adult.

Man Comes to America. Coy, Harold. 1965. Little, Brown, Boston. Overview of North American prehistory suitable for intermediate and secondary grade levels. (SC Classroom Guide)

Motel of the Mysteries. Macaulay, David. 1979. Houghton Mifflin, Boston. This is a humorous look at archaeology in the distant future, and what comically incorrect conclusions archaeologists infer about our twentieth-century society. Suitable for junior high, high school, and adults. (NPS Newsletter)

The Mound Builders. Silverberg, Robert. 1970. New York Graphic Society. Greenwich, Connecticut. Smithsonian investigators have been studying Indian mounds in Eastern America for more than a century. This abridged version examines their efforts of analyzing Poverty Point, Adena, Hopewell, and Temple Mounds. Secondary grades and adults. (SC Classroom Guide)

My Music Reaches to the Sky: Native American Musical Instruments. Native American Project. 1973. Center for the Arts of Indian America. Washington, DC. Available through CEMREL, 3120 59th Street, St. Louis, MO 63139.

Myths of the Cherokee and Sacred Formulas of the Cherokee.

Mooney, James. 1982. Charles and Randy Elder, Booksellers, Nashville, TN.

Myths and Tales of the Southeastern Indians. Swanton, John R. 1929. Bureau of American Ethnology Bulletin 88, Washington, DC.

Prehistory of North America. Jennings, Jesse D. 1974. McGraw-Hill Book Co, New York, NY. This introductory textbook examines concepts, methods, interpretation, and report writing in archaeology. Secondary grades, adults. (SC Classroom Guide)

The Riddle of the Past: How Archaeological Detectives Solve Prehistoric Puzzles. Baldwin, Gordon. 1965. Norton, New York. Archaeological field and laboratory methods are described, as well as ways amateurs can work alongside professional archaeologists. Intermediate and secondary grades. (SC Classroom Guide)

Science and the Secret of Man's Past. Folsom, Franklin. 1966. Harvey House, Irvington-on-Hudson, New York. The scientific discoveries of the past 300 years and how they led to the development of archaeology. Intermediate and secondary grades. (SC Classroom Guide)

The Southeastern Indians. Hudson, Charles. 1976. The University of Tennessee Press. This book takes an in-depth look at the Southeastern Indians through time. It may prove to be somewhat long at times to a lay audience, but contains a lot of useful information. Adults will find this book informative.

Surface Collecting in Georgia: A Guide for the Avocational Archaeologist. Simpkins, Dan. 1991. Office of the State Archaeologist, Department of Sociology and Anthropology, West Georgia College, Carrollton, GA. See the discussion of this pamphlet in Chapter I.

Sun Circles and Human Hands: The Southeastern Indians Arts and Industries. Fundaburk, Emma Lila, Mary Foreman, and Douglass Fundaburk. 1957. Luverne, AL. Third printing 1968: Kingsport Press, Inc., Kingsport, TN. The arts and cultural traditions of all periods of prehistory in the southeast. Well illustrated, with many photographs and line drawings. Suitable for high school students and adults.

Underwater Archaeology: Treasures beneath the Sea. Pinney, Roy. 1970. Hawthorn Books, New York. Explores history and

technology of diving and underwater archaeology, and the training to become an underwater archaeologist. Looks at specific inundated sites in America. Secondary grades. (SC Classroom Guide)

ARCHAEOLOGY BOOKLETS FOR A POPULAR AUDIENCE

Georgia

African-American Archaeology: The Story of Augusta's Springfield Community. (1992, In Press) Joseph, Joe. New South Associates, Inc., Stone Mountain, Georgia. Examines archaeological and historical investigations of a black community in Augusta. Available through the Office of Economic Development, City of Augusta, 4 Fifth Street, Augusta, GA 30903.

Archeology at the Mill Creek Site. (1989) Gresham, Thomas H., and Robbie F. Ethridge. Southeastern Archeological Services, Inc., Athens, Georgia. In 1988 archaeologists conducted investigations for the city of Americus. The Mill Creek site was inhabited intermittently for 10,000 years. Information about changing lifeways is documented in this report, along with the archaeological methods used to uncover the data. Funded by and available through the city of Americus. Contact: Chief Administrative Officer, City of Americus, P.O. Box M, Americus, GA 31709.

Archaeology at Peachtree City, Georgia. (1992, In Press) Elliott, Rita Folse. Southeastern Archeological Services, Athens, Georgia. Describes the prehistory of Georgia while examining the archaeological investigations undertaken during the expansion of the local Falcon Field Airport. It discusses the findings of the archaeologists and how they are interpreted, archaeological techniques used to learn about the Falcon Field site, and why the site is important. (See "Exhibits/Displays" below for two related entries.) Funded by Peachtree City/Peachtree City Airport Authority. Available through: Manager, Peachtree City Airport Authority, P.O. Box 2371, Peachtree City, GA 30269.

The Bethany Cemetery. (1989) Elliott, Daniel T., and Rita Folse Elliott. A colonial cemetery in south Georgia was lost. This booklet details the search to find the tombstone-less cemetery through historical records. It describes the archaeological excavations that confirmed the suspected property as the actual cemetery. Georgia Salzburger Society, P.O. Box 916, Rincon, GA 31326.

The Lost Diary of Rupert Schrempff. (1990) Elliott, Daniel T., and Rita Folse Elliott. This imaginary diary from the mid-1700s is based on information uncovered in archaeological investigations at the colonial Salzburger settlement of New Ebenezer. It is written through Rupert Schrempff's eyes, based on the artifacts recovered from his 1750s cellar. Available through the Georgia Salzburger Society, P.O.Box 916, Rincon, GA 31326.

The Charlotte Woods Soapstone Quarry, Dekalb County, Georgia. (1991) Bloom, Jonathan A. Garrow and Associates, Atlanta, Georgia. The natural outcrop of soapstone known as Soapstone Ridge, in Atlanta, was the scene of many prehistoric quarry sites. This booklet examines the use of soapstone by Native Americans as revealed through archaeological excavations. (See *The Live Oak Soapstone Quarry,* below.) Prepared for and available through Waste Management of Georgia, Marietta.

The Live Oak Soapstone Quarry, Dekalb and Fulton Counties, Georgia. (1991) Elliott, Daniel T. Garrow and Associates, Atlanta, Georgia. Details archaeological excavations at a soapstone quarry in Atlanta. The soft rock known as soapstone was quarried there by Indians between 2200 and 900 B.C. and fashioned into bowls. Available through Waste Management of Georgia, Inc., Marietta.

MAGAZINES

Archaeology. Young, Peter, editor. This magazine is published six times a year and covers archaeological stories around the world in a non-technical manner suitable for high school students as well as adults. Available by subscription from The Archaeological Institute of America, 15 Park Row, New York, NY 10038. (SAA Forum)

Cobblestone Publishing offers several childrens' magazines that often include archaeology articles and activities. The American Museum of Natural History, in conjunction with Cobblestone, publishes *FACES: The Magazine about People* for grades 4-9. The following issues are devoted to archaeology: May 1985, November 1985 and 1986, January 1988, February 1990, and January 1991. Articles range from Mayan to underwater archaeology. *COBBLESTONE: The History Magazine for Young People* appeals to 4-6 graders and has examined archaeology in the United States in its June 1983 issue. *CALLIOPE: World History for Young People* is written for grades 5-10 and includes a 2-3 page section highlighting archaeology in each issue. The May 1991 issue included information on lost cities. Subscription information and a free catalogue of back issues for all three magazines can be obtained

from Cobblestone Publishing, Inc., Dept. ARCH, 30 Grove Street, Peterborough, New Hampshire 03458. (SAA Newsletter)

Expedition: The Magazine of Archaeology/Anthropology. Published quarterly, this well-illustrated magazine covers research in both these fields. University Museum, University of Pennsylvania, 33rd and Spruce, Philadelphia, PA 19104.

National Geographic, National Geographic Society. A monthly with outstanding color photographs. Subscriptions from National Geographic Society, Box 2895, Washington, DC 20013.

National Geographic World, published for young readers (elementary grades). Contains activities, games, and stories often dealing with archaeology. National Geographic Society, P.O. Box 2330, Washington, D.C. 20013.

POSTERS

"Indian Ways of Life: Clothing, Buildings and Shelters, Weapons and Crafts". Published by The World Book Encyclopedia. Available from: Field Enterprises Educational Corporation, Merchandise Mart, Chicago, IL 60654.

Map. Illustrates all the Indians of North America and their geographic locations. Includes description and illustrations of the major tribes, their clothing, and dwellings. Available from the National Geographic Society, Washington, DC 20036.

AUDIO TAPES

Ceremonial Songs and Dances of the Cherokee. Lewis, Kevin. These traditional Cherokee songs are sung by a Cherokee-Navajo Medicine Man. Produced by Millard Clark, Indian Sounds, P.O. Box 6038, Moore OK 73153.

Cherokee Legends I. Smith, Kathi. This Cherokee Legend Teller speaks of ten different legends explaining existence and events in the world. Published by: Cherokee Publications, P.O. Box 256, Cherokee, NC 28719, (704)488-2988.

Other cassette tapes, videos, and books from Cherokee are listed in a catalog available from Cherokee Publications, P.O. Box 256, Cherokee, NC 28719, (704)488-2988.

VIDEO TAPES

Georgia

C.S.S. Georgia. Video tape of the wreck of the ironclad warship in Savannah Harbor. The Corps of Engineers conducted archival study, hydrographic, magnetometer, and side-scan sonar surveys, and visual dive inspections. The Coastal Heritage Society operates Old Fort Jackson, located adjacent to the wreck, and is the principal support of the wreck. Contact Judy L. Wood, CESAS-PD-EI, Savannah District Office, U.S. Army Corps of Engineers, Box 889, Savannah, GA 31402-0089, (912)944-5794. (LEAP)

Oconee: Valley of the Chiefs. 29 minutes. Looks at Mississippian life as revealed through archaeological excavations. Available through Georgia Humanities Resource Center, Zach S. Henderson Library, Georgia Southern College, Statesboro, GA 30460, (912)681-5482. (UGA/CCE Workshop)

St. Catherine's: An Island in Time. 29 minutes. Excavations at St. Catherine's Spanish mission. Available through Georgia Humanities Resource Center, Zach S. Henderson Library, Georgia Southern College, Statesboro, GA 30460, (912)681-5482. (UGA/CCE Workshop)

A Class Excavation. (1987) Michael C. Turner. A class of fourth graders participates in an "archaeological dig" of their own production. Archaeological field methods are employed in a realistic simulation. Available from Michael Turner, P.O. Box 131, Murrayville, GA 30564.

Southeastern States

First Frontier. 60 minutes. This film is the sequel to Lost in Time (below). It picks up the story of the Indians and Desoto's expedition and carries it through to the Removal. This Alabama story pertains equally to Georgia. Auburn Television, Auburn University, Auburn, AL 36849. (UGA/CCCE Workshop)

Indians of the Southeast. (1984), in the Native American Series. Grades 3–8. Actors portray life and customs, pottery making, stone tool production, hunting, gathering, and fishing. Examines arrival of people in North America and changes in technology, religion, and social customs, concluding with the impact of European contact on Indian life. An excellent and interesting overview. BARR Films,

12801 Schabarum Ave., Irwindale, CA 91706, (800) 234-7878.

Lost in Time. 60 minutes. Alabama prehistory, but equally effective in investigating Georgia's similar prehistoric past from 12,0000 B.C. to Desoto's conquest. Contact: Auburn Television, Auburn University, Auburn, AL 36849. (UGA/CCE Workshop)

Prehistory of South Carolina. 1 hr. A lecture overview of the prehistory of South Carolina by the State Archaeologist. Part of a series by the South Carolina Department of Education produced by South Carolina Educational Television. Contact Bruce Rippeteau, Director and State Archaeologist, South Carolina Institute of Archaeology and Anthropology, 1321 Pendleton Street, Columbia, SC 29208, (803)734-0566, (803)777-8170. (LEAP)

General

American History? It's Beneath Your Feet! Starbird, Robert and Daniel Rainey. (1990). High school, adults. Media, Inc., Box 496, Media, PA 19063. Order # ISBN 0-924580-24-0. (SAA Forum)

Assault on Time. (1990) Produced by Federal Law Enforcement Training Center. Suitable for high school students, adults. National Audiovisual Center, 8700 Edgeworth Dr., Capitol Heights, MD 20743. Order # A18242 (VHS), A17331 (3/4 in.) (SAA Forum)

Colonial Living: Life in a Colonial Home. Run Time- 14:45. Tape Number 4170. Available from the Georgia Department of Education. (M. Duke)

Discovering American Indian Music. From the "Discovering Music" Series. Run Time- 24:00. Tape Number 3125. Available from the Georgia Department of Education. (M. Duke)

Documentation of Archeological Site Vandalism. Site vandalism on National Forest land. Contact Rodney Snedeker, Forest Archeologist, USDA Forest Service, P.O. Box 2750, Asheville, NC 28802, (704)257-4255. (LEAP)

Ethics and Archaeology—Conflicts in Collecting. Hooge, Paul, et al. (1986) Produced for a high school audience and older. Available through: Licking County Archaeology and Landmarks Society, P.O. Box 271, Granville, OH 43023. (SAA Forum)

Indians of Early America. (1958) Run Time- 21:18. Tape Number 4176. Available from Georgia Department of Education. (M. Duke)

Man of Lightning. 29 minutes. Dramatizes one of the many American Indian legends, telling the story of Red Otter's quest to find his lost father, Thunder. Georgia Humanities Resource Center, Zach S. Henderson Library, Georgia Southern College, Statesboro, GA 30460, (912)681-5482. (UGA/CCE Workshop)

Map Skills: Using Different Maps Together. From the "Map Skills" Series. Run Time 11:00. Tape Number 4183. Available from the Georgia Department of Education. (M. Duke)

Observing, Recording, Mapping and Graphing. From the "Science Skills" Series. Run Time 16:00. Tape Number 4618. Available from the Georgia Department of Education. (M. Duke)

Problem Solving: Using Maps. From the "Math Works" Series. Run Time 14:48. Tape Number 4504. Available from the Georgia Department of Education. (M. Duke)

Seeking the First Americans. From the "Odyssey" Series. Run Time 58:45. Tape Number 4347. Available from the Georgia Department of Education. (M. Duke)

Then Came Man. Part of the "North America: Growth of a Continent" Series. Run Time 14:25. Tape Number 4406. Available from the Georgia Department of Education. (M. Duke)

Other videos are available from BARR Films, 12801 Schabarum Ave., Irwindale, CA 91706, (800) 234-7878; Encyclopedia Britanica Corp., (800) 554-9862; and the Georgia Department of Education, (404) 656-2473.

FILMS

American Indians of the Southeast. Contains six filmstrips and cassettes examining today's Indians, their history, crafts, and religious beliefs. Coronet Media Company, Coronet Building, 65 E. South Water St., Chicago, IL 60601. (Art and Culture)

The Early Americans. 41 minutes. A general overview from Paleo-Indian times to the archaeological remains of Mesa Verde and Pueblo Bonito. Can be used as an introduction to Georgia archaeology. Contact Ocmulgee National Monument, 1207 Emery Highway, Macon, GA 31201. (UGA/CCE Workshop) Also available from Shell Film Library, 1433 Sadlier Circle West Drive,

Indianapolis, IN 46239, (317)872-7440 (Art and Culture)

The Long Road Home. 27 minutes. A panoramic history of the Native Americans, as seen through the eyes of a Creek Indian narrator. Contact Ocmulgee National Monument, 1207 Emery Highway, Macon, GA 31201. (UGA/CCE Workshop)

"Native American Heritage" sound filmstrip series includes, "The Old Ways", "Art: Reflections of a Culture", "The Flight for Survival", "Beliefs and Ceremonies", and "The New Ways". They are available from Encyclopedia Britannica Educational Corporation, 425 North Michigan Avenue, Chicago, IL 60611.

GAMES

Adventures in Fugawiland: A Computer Simulation in Archaeology. Price, Doug, and Gitte Gibauer. (1990) Suitable for high school through adult. Available from: Mayfield Publishing Co., 1240 Villa St., Mountain View, CA 94041. Order # IBSN 0-87484-948-9. (SAA Forum)

Dig 2. Lipetzky, Jerry. (1982) Game for grades 6-9. Contact: Interact, P.O. Box 997-S2-91, Lakeside, CA 92040. Order #5030. (SAA Forum)

Elementary Archaeology. (1986) Michael C. Turner. A computer-assisted instructional program on basics of archaeology and related sciences. Michael Turner, P.O. Box 131, Murrayville, GA 30564.

Mystery Fossil: A Physical Anthropology Laboratory Exercise for the Macintosh. Omohundro, John, and Kathleen Goodman. (1990) Computer simulation for high school through adult. Mayfield Publishing Co., 1240 Villa St., Mountain View, CA 94041. Order # IBSN 1-559340-019-3. (SAA Forum)

Puzzle. McLure, John. (1972) Grades 7–12. Contact Interact, Box 997-S2-91, Lakeside, CA 92040. Order # 3061. (SAA Forum)

Time Capsule. Eells, Don. (1978) The target audience is grades 5–12. Available from: Interact, P.O. Box 997-S2-91, Lakeside, CA 92040. Order # 5030. (SAA Forum)

Talking Rocks. Vernon, Robert. This game is for grades 5 and up and can be ordered through: Simile II, P.O. Box 910, Del Mar, CA 92014. (SAA Forum)

NEWSLETTERS

Anthro Notes. Newsletter for teachers published by the National Museum of Natural History. The Fall, Winter, and Spring issues are all free of charge. Contact P. Ann Kaupp, Public Information Office, Department of Anthropology, National Museum of Natural History, Smithsonian Institution, Washington, DC 20560.

Archaeology and Eduction. This bi-annual, international newsletter encourages the exchange of archaeological education ideas between archaeologists and educators. It is available by subscription. Contact: Carole Stimmel, Editor, Archaeology and Education, Archaeological Resource Center, c/o Danforth Technical School, 840 Greenwood Ave., Toronto, Ontario, Canada M4J 4B7.

Archaeology and Public Education. This new newsletter was initiated in response to work by the Society for American Archaeology's Committee on Public Education. Its growing network links the ideas of archaeologists and educators. New programs and contacts, pertinent legislation, a calendar of events, articles, and classroom activities are included. The quarterly newsletter can be received at no charge from: Ed Friedman, Bureau of Reclamation, Denver Federal Center, Box 25007, Attention D-5530, Denver, Colorado 80225-0007.

Remnants. The English Heritage Education Service publishes this journal consisting of articles by and for teachers, along with classroom and site projects concerning the historic environment. There is no charge to schools and colleges. The journal is published three times a year. Contact: English Heritage Education Service, Keysign House, 429 Oxford St., London, England, W1R 2HD.

Teaching Anthropology. This free, semi-annual newsletter offers a forum for teachers and anthropology professors to exchange curriculum information and ideas. Contact Monica Lewis, Circulation Manager, Teaching Anthropology Newsletter, Department of Anthropology, Saint Mary's University, Halifax, Nova Scotia, B3H 3C3.

BROCHURES

"Archaeology as a Career" (1954) by J.H. Rowe and reprinted by the Archaeological Institute of America is available for $1.00 per copy from Archaeological Institute of America, P.O. Box 1901, Kenmore Station, Boston, MA 02215.

"Your Career in Archaeology" (1976) by George E. Stuart and published by the Society for American Archaeology describes archaeology as a career, employment opportunities, and educational requirements. The Society for American Archaeology, 1511 K. Street, N.W., Suite 716, Washington, DC 20005.

CURRICULUM MATERIALS

Adventures with Archaeology. (1988) Turner, Michael C. A sound-slide introduction and survey of archaeology, classroom activity suggestions, activity sheets, computer program, and learning game ideas. Available from Michael Turner, P.O. Box 131, Murrayville, GA 30564.

Art and Culture of the Southeastern Indians: Rationale and Use in the School Curriculum. 2nd ed. (1982) Rapp, Susan Power. Excellent tool to learn about Native American culture through art. Explains the history and meaning of ceremonies and lifeways. Includes Indian recipes, myths, symbols, pottery decorations, carvings, and weavings, and craft activities to incorporate in the classroom. Published by Northeast Georgia Cooperative Educational Service Agency, 375 Winterville, GA 30683.

Archaeology. (1986) Stark, Rebecca. Student and teacher volumes are available for grades 5-12. Order from: Educational Impressions, 210 Sixth Ave., Hawthorn, NJ 07507. Order #34-2AP for teacher volume and #31-8AP for the student volume.

Archaeology: Tools and Techniques of an Outdoor History/Science Class for Young Researchers. Project ALERT. Richland School District Two. Columbia, SC.

Classroom Archaeology: An Archaeology Activity for Teachers. (1986) Hawkins, Nancy. Division of Archaeology, Baton Rouge, LA. Manual for teachers with emphasis on Louisiana archaeology. Many of the exercises in this volume were selected or adapted from this book.

Can You Dig It? A Classroom Guide to South Carolina Archaeology. (1989) Hawkins, Nancy, Stanley South, Tom Charles, and Margaret Walden. Institute for Anthropology and Archaeology, University of South Carolina, Columbia, S.C. 29208. Manual for teachers with emphasis on South Carolina prehistory. Some of its classroom activities were incorporated in this volume.

Cherokee Villages in South Carolina. Sheriff, Anne, ed. Forest Acres Elementary School. Easley, SC. This exhaustive list of historical documents on several Cherokee villages in South Carolina is valuable as an archival study of an historic tribe. Equally impressive is the fact that this book was researched (125 books and manuscripts consulted) and written by students in the editor's gifted programs (third through sixth grades). It is a unique example of one curriculum project that appeals to students and combines research, reading, writing, and history into a useful by-product. Available from: A Press, P.O. Box 8796, Greenville, SC 29604.

Clues From the Past: A Resource Book on Archeology. Wheat, Pam, and Brenda Whorton, editors. (1990) A manual suitable for use with all grades. Available from Hendrick-Long Publishing, Box 25123, Dallas, TX 75225. Order #ISBN 0-937460-65-6.

Dig into the Past: How Old Is It? Bell, Patti, and Jeanne Miller. This book is for use by teachers of upper elementary and secondary grade levels. Order from: Thinking Caps, Inc., P.O. Box 17714, Phoenix, AZ 85011. Order #3106.

Discovering Archaeology. McCarthy, Gloria, and Molly Marso. (1989) Student and teacher volumes are available for this manual suitable for grades 4-12. Contact: United Educational Services, Inc., D.O.K. Publishers, P.O. Box 1099, Buffalo, NY 14224. Order # ISBN 0-88047-194-8 for the teacher edition and 0-88047-195-6 for the student edition. (SAA Forum)

Dr. Charles Fairbanks Memorial Discovery Lab Teachers Guide. Ocmulgee National Monument, National Park Service, U.S. Department of the Interior, 1207 Emery Highway, Macon, GA 31201, (912) 752-8257. The manual for the Discovery Lab, a fine resource for children and their teachers. Describes the Lab and its mysteries waiting to be discovered, provides background concepts, spells out activities, and has a good bibliography.

Exploring Archaeology. Bell, Patti. Fifth grade. Available from the author: Box 1032, Bloomfield, NM 87413. (SAA Forum)

Heritage Education Resource Guide. (1990) Resource guide for teachers of all grades. National Trust for Historic Preservation, 1785 Massachusetts Ave. N.W., Washington, D.C. 20036. (SAA Forum)

BEST COPY AVAILABLE

Ideas for Teaching Gifted Students. Mallis, Jackie. (1982) This material is divided into five curriculums, two for elementary social studies and three for secondary social studies classes. The former include, "Learning About Culture" and "Archaeology", while the latter consist of "Introduction to Anthropology", "Prehistoric Times", and "Ancient Civilizations". These units are available from Multi Media Arts, Building E1, Box 180626, Austin, TX 78718. Order #1004 for the elementary book and #1005 for the secondary level book. (SAA Forum)

Lesson Plan (QCC/QBE) Package. Copyrighted and published by the author, these daily lesson plans are designed to meet the state's Quality Core Curriculum objectives and Quality Based Education requirements. They include slide shows, news clips, video tapes, research papers, artifacts, and other materials. For more information contact: W. Maxwell Duke, Fort Valley Middle School, 814 Peggy Drive, Fort Valley, Georgia 31030.

Linking the Past with the Future in Archaeology. Quimbach, Cameron, and Katherine Kappus (1988) While not specifically about Georgia archaeology, this series of programs educate elementary and secondary students about general North American archaeology. The programs, "Indiana Jones: Fact or Fallacy", "Ancient Clues", and "Stories from Stone", are presented by staff members of the private outreach program and are not available as self-guided curriculums. Contact Archaeological Communications, P.O. Box 30262, Indianapolis, Indiana 46230. (SAA Newsletter)

The Native People of the Northeast Woodlands. Brundin, Judith, et al. (1990) Suitable for secondary audiences. Available from: Museum of the American Indian-Heye Foundation, New York, NY. Order # ISBN 0-934490-45-7. (SAA Forum)

Pathways to the Past: Educator's Guide to Resources in Archaeology. Smith, K.C. (1989, revised 1991) Resources for teachers of all grades. Contact: K.C. Smith, P.O. Box 10552, Tallahassee, FL 32302. (SAA Forum)

Project Archaeology: Saving Traditions (PAST). McNutt, Nan. (1989) "The Artifact", "The Site", and "The Culture" are the three units of this curriculum recommended for grades 6–8. Price: teacher's guide $14.50, student notebooks $1.25 per unit, and supplementary materials (sold either as a set or separately). Contact Sopris West, Inc., 1140 Boston Avenue, Longmont, CO 80501, (303)651-2829. (NPS Workshop 1990).

Science Boxes, Archaeology. Museum of Natural History, University of Georgia. One of the science boxes centers on archaeology and Native American culture. The archaeology box contains books on the subject, along with examples of artifacts and replicas such as pottery, stone, bone and shell tools, and shell gorgets. It also contains a selection of animal bones indicative of the Indian diet and color photographs of the animals represented by the bones. Boxes are loaned for one to two weeks and require a deposit. Tours of the archaeological and zooarchaeological collections are available on a limited basis. For information about boxes or tours call (706)542-3940.

Sleuthing through History: An Introduction to Archaeology. While some of the paper and pencil activities in this collection are oriented towards Old World Archaeology, many revolve around techniques and principles of archaeology in North America. Has lessons on the purpose of archaeology, site selection, preservation, terms, dating techniques, and artifact functions are examined. Available through: Social Studies School Service, 10,000 Culver Boulevard, P.O. Box 802, Culver City, CA 90230. (SC Classroom Guide)

Stones and Bones: A Laboratory Approach to Physical Anthropology. Anisman, Milton, et al. Emphasizes the physical anthropology aspect of archaeology. For high school students. Los Angeles Unified School District, Physical Anthropology Center, 6625 Balboa Blvd., Van Nuys, CA 91406. (SAA Forum)

Stones and Bones: Archaeology. Doherty, Edith, and Louise C. Evans. (1981) This archaeological manual targets grades 3-8 and is available from: Synergetics, P.O. Box 84, East Windsor Hill, CT 0602. Order # STO. (SAA Forum)

Teacher's Resource Packets: "Anthropology", and "North American Indians". Suitable for all grade levels. Includes bibliographies, activities, and materials for middle and high school teachers wishing to incorporate archaeology in science and social studies curriculums. Office of Public Information, Department of Anthropology, National Museum of Natural History, Smithsonian Institution, Washington, D.C. 20560. (SAA Forum)

Teaching Boxes. The State Archaeologist in Georgia offers an archaeology educational package to interested Georgia teachers in grades 1–12. It has "hands-on" artifacts, reference information, and a video. Borrowers are responsible for forwarding and return

postage. The loan period is seven days. Archaeology Education Office, Georgia State Archaeologist, 208 Martha Munro Hall, West Georgia College, Carrollton, GA 30118.

ARTIFACT REPLICAS

These companies create artifact replicas, including those made of shell, antler, stone, and bone. Fossil replicas, audiovisual materials about human fossils and Indian archaeology, and books about linguistics and physical anthropology are available. Catalogues are available: Lithics Artifacts Casting Co., Susan Heller, 198 Binnington Road, Buffalo, NY 14226; Lithic Casting Lab, Route 1, Box 102, Troy, Illinois 62294; Carolina Biological Supply Company, Burlington, NC 27215.

ARCHAEOLOGICAL SOCIETIES

The Society for Georgia Archaeology (SGA)
Membership is open to professional archaeologists, avocational archaeologists, and anyone with an interest in Georgia archaeology. The society has local chapters throughout the state, including Atlanta, Augusta, Coastal, Columbus, Douglas, Georgia Mountains, Macon, Northeast Georgia, and Northwest Georgia. Dues also entitles members to the quarterly newsletter, The Profile, and one to two issues of this journal, Early Georgia. Membership information may be obtained by writing: Treasurer, Society for Georgia Archaeology, P.O. Box 930682, Norcross, GA 30093.

ARCHAEOLOGICAL FIELDWORK OPPORTUNITIES

Annual listings of fieldwork opportunities and field schools are available from the Archaeological Institute of America, P.O. Box 1901 Kenmore Station, Boston, MA, 02215, and the American Anthropological Association, 1703 New Hampshire Ave, N.W., Washington, D.C. 20009. The AAA also publishes annually the Guide to Departments of Archaeology ,which lists Universities and their specialties.

The Earthwatch program also offers fieldwork opportunities in archaeology. Write: P.O. Box 403, Watertown, MA 02172.

The Center for American Archaeology, Kampsville Archaeological Center, Kampsville, IL 62053 offers programs for upper level high school students, college students, non-professionals, and teacher workshops.

Local universities and archaeological societies often conduct fieldwork using volunteers.

EXHIBITS/DISPLAYS (NON-MUSEUM)

Georgia, Permanent Exhibits

Live Oak Landfill, Waste Management, Dekalb County. The office lobby contains a small display case exhibit interpreting the Indian soapstone quarry excavated by archaeologists prior to landfill construction. Address: Located near the intersection of Moreland Avenue and I-285.

Mill Creek Exhibit, Mill Creek Wastewater Treatment Facility. An interpretive exhibit of the archaeological excavations conducted at the facility, the artifacts found, and other information is located in the lobby. Address: Hwy 377 N, Americus, GA 31709. Call first for scheduling arrangements.

Peachtree City Library, Fayette County. The Library contains a small, permanent exhibit detailing archaeological investigations undertaken during the expansion of the local Falcon Field Airport. The exhibit contains photographs, maps, and artifacts interpreting Peachtree City site, including the Native Americans who lived there and the methods used by archaeologists to uncover new information about them. Address: 120 Willowbend Rd., Peachtree City, GA. (404)487-8557.

Georgia, Travelling Exhibits

Effingham County; Georgia Salzburger Society: "Ebenezer Under Ground". Some of Georgia's first settlers, Salzburgers from the Austrian alps, are the topic of this small travelling exhibit. It highlights the history of these colonial Georgians and explores archaeological excavations conducted at their town of Ebenezer. The exhibit contains photographs, maps and drawings with interpretive labels. Suitable for fourth grade through adult. Contact: Georgia Salzburger Society, P.O. Box 916, Rincon, GA 31326.

Fayette County; Peachtree City: "Archaeology at Peachtree City". This is a small travelling exhibit based on the Falcon Field site. (See popular booklets, mentioned above.) The travelling exhibit targets fifth and sixth graders. It includes a box of hands-on activities for students to do in conjunction with the exhibit. Available August, 1992. Contact: Manager, Peachtree City Airport

Authority, P.O. Box 2371, Peachtree City, GA 30269.

General, Travelling

The U.S. Forest Service has a travelling exhibit entitled "Windows on the Past" with an accompanying brochure. It is based on the Forest Service public education program and includes archaeology in a variety of time periods and regions. It has been circulated free of charge upon request. United States Forest Service, U.S. Department of Agriculture, Box 96090, Washington, D.C. 20090-6090, (202)382-9427. (SHA'91 Exhibit of Educational Resources)

GEORGIA MUSEUMS

(Compiled and annotated by the Georgia Association of Museums and Galleries)

Albany:
Thronateeska Heritage Foundation. 100 Roosevelt Ave, Albany, GA 31701, (912)432-6955. Facilities include museum focusing on the cultural and natural history of southeast Georgia, and a planetarium.

Andersonville:
Andersonville National Historic Site. National Park Service, Andersonville, GA 31711, (912)924-0343. Visitors' Center houses displays and artifacts relating the story of Andersonville and Civil War prisons. Site includes Andersonville National Cemetery. Prisoner of War Museum houses displays and artifacts commemorating prisoner of war sacrifices from all American wars, 1776-1972.

Andersonville Oldtime Farm Area and Museum. P.O. Box 35, Andersonville, GA 31711, (912)924-2558. Pioneer farm complex in 5-acre city park includes log cabin, barn, farm animals, sugar can mill and country store. Restored turn-of-the-century depot houses local history display, Civil War artifacts. Master blacksmith at work in blacksmith shop on weekends.

Drummer Boy Civil War Museum. Church Street, Andersonville, GA 31711, (912)924-2558. Housed in a ca. 1900 store, Civil War museum features memorabilia for both the North and the South including uniforms, guns, documents, flags, a diorama and a special naval history section.

Atlanta:

Atlanta Historical Society. 3101 Andrews Drive, NW, Atlanta, GA 30305, (404)261-1837. Twenty-five acre complex including Tullie Smith plantation house and grounds (ca. 1840), 1928 Swan House (Palladian revival mansion), modern museum and archival center, restaurant and gift shop, woodland trails, and Civil War exhibit.

Emory University Museum of Art and Archaeology. Michael C. Carlos Hall, 571 Kilgo Circle, Emory University, Atlanta, GA 30322, (404)329-7522. Collections of ancient art and archaeology from the Mediterranean and Near East, including Egyptian mummy cases and classical Greek sculpture and vase painting, and art, primarily drawings and prints, from the Renaissance to the present.

Federal Reserve Bank of Atlanta. 104 Marietta Street, NW, Atlanta, GA 30303-2713, (404)521-8788. Monetary museum exhibits old and rare currency, coins, and other types of money.

Fort Peachtree. 2630 Ridgewood Road, NW, Atlanta, GA 30327, (404)355-8229. A reconstruction of the War of 1812-era fort that marked the beginning of the end of Indian occupation of Atlanta. Exhibits, displays and artifacts depicting thousands of years of occupation on the site.

Georgia State Museum of Science and Industry. Georgia State Capitol, Capitol Square, Atlanta, GA 30334, (404)656-2846. State-sponsored museum featuring agriculture, industry, geology, archaeology, birds and animals of Georgia in original artifacts and dioramas.

Augusta:
Augusta Richmond County Museum. 540 Telfair Street, Augusta, GA 30901, (706)722-8454. Housed in the Greek Revival style Richmond Academy Building (1856), this regional museum focuses on the history of the Augusta area. Exhibits include a 1930s railway complex DC-3 aircraft and artifacts pertaining to the Revolutionary War, Indians, industrial development, and natural history.

Blairsville:
Brasstown Bald Visitor Center. U.S. Forest Service, P.O. Box 216, Blairsville, GA 30512, (706)745-6928. Features observation deck atop Georgia's highest mountain. Includes interpretive exhibit, "Man on the Mountain," tracing the human and natural history of the entire southern Appalachian region.

Blakely:
Kolomoki Mounds Museum. Route 1, Blakely, GA 31623, (912)723-5296. Magnificent Indian burial mound and village site with rebuilt mounds. Operated by Georgia Department of Natural Resources.

Calhoun:
New Echota State Historic Site. Route 3, Calhoun, GA 30701, (706)629-8151. Capital town of the Cherokee Nation, including Rev. Samuel Worcester's 1828 mission and Vann Tavern with reconstructions of the courthouse and Cherokee Phoenix Print Shop.

Cartersville:
Etowah Indian Mounds State Historic Site. Route 2, Cartersville, GA 30120, (706)382-2704. Location of largest Indian settlement in Etowah River Valley, occupied A.D. 1000–1500.

Chatsworth:
Fort Mountain State Park. Chatsworth, GA 30705, (706)695-2621. Mountainside park includes historic trails, tower overlook, and Woodland Period ceremonial Indian sites. Cottages and camping available.

Vann House State Historic Site. Route 7, Box 235, Junction Rts. 225 and 52, Chatsworth, GA 30705, (706)695-2598. Restored 1804 Federal-style brick home of James Vann and his son, Joseph Vann, both influential leaders in the Cherokee nation. Period furnishings and archaeological artifacts.

Columbus:
Columbus Museum of Arts and Sciences. 1351 Wynnton Road, Columbus, GA 31906, (706)323-3617. Varied art collections with emphasis on American painting; regional history and folklife exhibits; southeastern Indian and archaeology exhibits; dinosaur and related fossil exhibits; and a restored log "dog-trot" house of the 1830s. Many temporary exhibits on arts and sciences, annual folk festival in September, education programs, field trips.

Confederate Naval Museum. P.O. Box 1022, Columbus, GA 31902, (706)327-9798. Gunboats and artifacts salvaged from the Chattahoochee River on display with other items relating to Confederate naval history.

Darien:
Fort King George State Historic Site. P.O. Box 711, Darien, GA

31305, (912)437-4770. Modern museum on site of 1721 British Colonial fort. Aboriginal and Spanish artifacts, reproductions of uniforms, weapons, and accouterments of British garrison. Permanent and changing exhibitions.

Ebenezer:
Georgia Salzburger Society Museum. GA Route 275 at the Savannah River, Ebenezer, GA, (912)355-1825. Located at the site of the dead town of Ebenezer, founded 1730s by the Protestant Salzburgers. Memorabilia representing the lifestyles of old and new Ebenezer, the settlers and their descendants.

Fitzgerald:
Blue & Gray Museum. Municipal Building, Fitzgerald, GA 31750, (912)423-5375. Museum interpreting the unique history of Fitzgerald, founded in 1895 by Civil War veterans of the Union Army. Collection includes Civil War relics from many states. Sponsors outdoor historical drama, "Our Friends, the Enemy."

Fort Benning:
National Infantry Museum. Baltzell Avenue, Building 396, Fort Benning, GA 31905, (706)545-2958. A military history collection of U.S. military arms, uniforms, equipment and associated items used since 1775.

Fort Gordon:
U.S. Army signal Corps Museum. 4th Avenue and 36th Street, Building 36301, Fort Gordon, GA 30905, (706)791-2818. A military history collection of signal related artifacts from 1860 to present, including the first signal flag and a 1967 satellite communications terminal.

Fort Oglethrope:
Chickamauga-Chattanooga National Military Park. P.O. Box 2126, Fort Oglethrope, GA 30742, (706)866-9241. The site of an important Civil War confrontation during the fall of 1863. Facilities include Chickamauga Battlefield and Visitors Center with interpretive exhibits. The Fuller Gun Museum at Chickamauga Battlefield features 355 U.S. shoulder weapons donated to the park in 1954 by Mr. and Mrs. Claude Fuller.

Fort Stewart:
24th Infantry Division and Ft. Stewart Museum. Att: AFZP-DPT-P (Museum Branch), Fort Stewart, GA 31314, (912)767-4891. Military history museum of the 24th Infantry Division, its

components, and Fort Stewart.

Greensboro:
Virginia E. Evans Museum. P.O. Box 238, 201 East Greet Street, Greensboro, GA 30642, (706)453-4100. Local history museum featuring artifacts excavated from nearby Lake Oconee. Exhibitions include vintage photographs and costumes.

Indian Springs:
Indian Museum. Indian Springs State Park, Indian Springs, GA 30231, (706)775-7241. Museum of Indian artifacts reflects the importance of the Creek Indian Treaty of 1825, which was signed nearby.

Macon:
Ocmulgee National Monument. National Park Service, 1207 Emery Highway, Macon, GA 31201, (912)752-8257. 684-acre park featuring prehistoric Indian mounds. Visitors' Center exhibits detail the archaeology and ethnography of the site and of central Georgia, spanning 12,000 years. The Discovery Lab at Ocmulgee National Monument is one of the best resources for teachers and their students in the state. It features great hands-on materials and curriculum help for teachers (see above, under "Curriculum Materials"). Contact Sylvia Flowers or Allen Marsh at the Monument.

Marietta:
Kennesaw Mountain National Battlefield Park. National Park Service, P.O. Box 1167, Marietta, GA 30061, (404)427-4686. Site of decisive battle in the Atlanta Campaign, 1864. Visitors' Center exhibit and slide program interpret surrounding events.

Midway:
Sunbury State Historic Site. P.O. Box 236, Route 1, Midway GA 31320, (912)884-5888. Museum on the site of Revolutionary War and War of 1812 forts with visible remains. Visitors' Center interprets history of the dead town of Sunbury from the Colonial period to the mid-19th century.

Richmond Hill:
Fort McAllister State Historic Site. P.O. Box 198, Richmond Hill, GA 31324, (912)727-2339. Restored 1861 Confederate fort with exhibits relating to the capture of the fort in 1864 as part of U.S. General W. T. Sherman's March to the Sea.

Rome:

Chieftains Museum. P.O. Box 1003, 80 Chatilllion Road, Rome, GA 30161, (706)291-1468. Exhibits focus on the archaeology of the museum's site and the history of the region. Housed in a remodeled pre-1830 house, originally owned by Major Ridge, a leader of the Cherokee Nation.

Roswell:
Chattahoochee Nature Center. 9135 Willeo Rd., Roswell, GA 30075, (404)992-2055. The center offers one and two hour programs for children covering topics involving Native Americans, such as: settlement locations, usage of medicinal plants, games, and traditional myths. Programs can be tailored for third through twelfth grades. Teachers must make arrangements with the center at least two weeks in advance (longer in the spring). The center offers a program in the summer called "Earth Week" for kindergarten through fourth grades. For scheduling and additional information write Chattahoochee Nature Center, Education Department.

St. Simons Island:
Fort Frederica National Monument. National Park Service, Route 9, Box 286-C, Frederica Road, St. Simons Island, GA 31522, (912)638-3639. Site of the historic fortified town of Frederica, founded 1730s. Visitors' Center houses museum of archaeological artifacts excavated on the premises.

Savannah:
Great Savannah Exposition. 303 West Broad Street, (adjacent to Visitors' Center), Savannah, GA 31499, (912)238-1779. Two-part exhibit within a restored 19th-century railroad terminal includes two special theaters giving history of Savannah and of the Battle of Savannah, 1779, as well as a large exhibit hall devoted solely to Savannah's history.

Old Fort Jackson Coastal Heritage Society. 1 Fort Jackson Road, (3 miles east of Savannah), Savannah, GA 31404, (912)232-3945. Restored brick and stone fort begun in 1808; houses museum focusing on military and construction hardware. Living history demonstrations, special events.

Ships of the Sea Museum. 503 East River Street, Savannah, GA 31401, (912)232-1511. Museum of maritime models and artifacts located in historic Factors' Walk area. Emphasis on importance of maritime activity to national growth. Over 100 model ships from around the world.

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Wormsloe State Historic Site. 7501 Skidaway Road, P.O. Box 13852, Savannah, GA 31406, (912)352-2548. Remains of early 18th-century fortified tabby house with picturesque oak alley. Visitors' Center houses exhibits on the history of the site and the Noble Jones family, owners of the property for over 200 years.

Statesboro:
Georgia Southern College Museum. Rosenwald Building, P.O. Box 8061, Statesboro, GA 30460-8061, (912)681-5444. A general purpose teaching museum whose largest collections are in natural history. A nine-foot Mosasaur skeleton, the oldest whale ever discovered in North America, two kinds of modern whales, Indian artifacts, and regional artifacts. The museum presents organized programs for public groups, schools, and college students. Planetarium by appointment only.

Stone Mountain:
Stone Mountain Park. Stone Mountain, GA 30086, (404)469-9831. Multi-functional park contains relocated, restored ante-bellum plantation complex, Civil War exhibits, water powered grist mill, covered bridge, and the Georgia Heritage Museum. Park surrounds and includes the world's largest granite outcropping.

Tifton:
Georgia Agirama. P.O. Box Q, I-75 at Exit #20, Tifton, GA 31793, (912)386-3344. Living history museum depicts village and farm life in rural Georgia in the late 1800s. Buildings relocated to the site include operating grist mill, newspaper office, blacksmith shop, church, sawmill, telephone exchange, turpentine still, cooper's shed and commissary. Costumed interpreters, school programs, workshops, demonstrations.

Tybee Island:
Fort Pulaski National Monument. National Park Service, P.O. Box 98, Tybee Island, GA 31328, (912)786-5787. Seacoast fort built 1829-47. Visitors' Center with exhibits, information desk and bookstore. Fort is large-scale outdoor exhibit covering 130 acres. Fort rooms are furnished, open to the public. Includes self-guiding trails, waysides, vistas, picnic area, and boat ramp.

Waynesboro:
Burke County Museum. 536 Liberty Street, Waynesboro, GA 30830, (706)554-5451. Restored and furnished house, ca. 1858. Exhibits include archaeological artifacts, agriculture, and history.

Winder:

Fort Yargo State Park. Route 81, Winder, GA 30680, (706)867-3489. Ca. 1792 small log blockhouse built to protect the settlers from the Indians on the Northeast Georgia frontier. Features exhibits about early 19th-century frontier life.

Winterville:
Carter-Coile Country Doctor's Museum. P.O. Box 306, 2 Georgia Avenue, Winterville, GA 30683, (706)742-8600 or 742-8412. By appointment only. Located in an 1874 frame structure, originally a doctor's office. Exhibits focus on country doctors and their equipment.

ARCHAEOLOGY IN THE CLASSROOM: A WORKSHOP FOR K-12 TEACHERS

The LAMAR Institute and the University of Georgia hold an eight-day workshop for K-12 teachers, on archaeology and Native Americans of Georgia. The purpose of the workshop is to provide teachers with current and accurate information on archaeology and what is known about our first inhabitants, so that teachers can harness children's interest in Indians and make learning fun. Through lectures and discussions with archaeologists, teachers return to their classrooms able to answer questions such as "what were the Indians houses like?", "did Indians go to school?", or "what did Indians eat?". Workshop attendees are able to give students accurate information on archaeological method, environmental conditions, and on the culture and history of Georgia's first residents.

The workshop focuses on three general areas. The first, archaeology and prehistory, covers the historical sequence of life in Georgia for the past 12,000 years. The second, archaeological methods, includes principles of archaeological methods, such as site formation, absolute and relative dating, and site survey. Participants join an in-progress excavation, and can proudly go back to their class and tell about their experience doing field work. The third topic included in the workshop is curriculum and material design. For the required workshop project teachers design a curriculum unit for their class.

This workshop draws draw on the faculty of the University of Georgia's Department of Anthropology for its speakers. Archaeologists, ecologists, and other professionals talk about current research. Site tours supplement the lectures and discussions. The Ocmulgee National Monument is one of our trips, important both for the famous archaeological site, and also for the Discovery Lab, a room organized and constructed by teachers and

containing materials that can be easily prepared for classroom use. In past years participants have visited the radiocarbon laboratory at the University of Georgia and the Rock Eagle site. For many, the highlight of the workshop is being part of an archaeological excavation and, under the supervision of a research archaeologist, participating in an actual archaeological excavation.

Evaluations at the end of the workshop and follow-up questionnaires show that teachers integrated what they learned at the workshop into their curriculum. Teachers report that their students responded enthusiastically to units planned during the workshop. One teacher wrote "They [the students] were thrilled. They enjoyed the activities and expressed great interest in learning about Native Americans." Another wrote that "student interest was very high . . .they seemed to learn easily"; and another said "at first they were doubtful, but they say it was the best unit all year".

In addition to the annual summer workshops, the LAMAR Institute and the UGA Department of Anthropology are planning a series of weekend workshops on a variety of topics. For more information on either the summer workshops or the weekend workshops call Jackie Saindon at (706) 613-8385 or Mark Williams at (706) 542-8737.

Chapter IV: Archaeological Ethics

ETHICAL STANDARDS FOR ARCHAEOLOGY

The Society for Georgia Archaeology (SGA) promotes the preservation of information about the past. Part of its mission is to educate the public about the past and about the conservation of archaeological sites and artifacts. SGA members themselves subscribe to professional standards of conduct, and they also would like the informed citizen to appreciate these standards and to follow them.

Members of the Society for Georgia Archaeology follow the ethical standards of the largest national association of archaeologists in North America, the Society for American Archaeology, which in 1961 published in its journal *American Antiquity* "Four Statements for Archaeology". The following paragraphs are extracted from these "Four Statements". The language and tone are academic, but the meaning is clear and the statements apply to all of us—students, lay persons, teachers, scientists, collectors, developers, land managers:

Archaeology, a branch of the science of anthropology, is that area of scholarship concerned with the reconstruction of past human life and culture. Its primary data lie in material objects and their relationships; of equal importance may be ancillary data from other fields, including geology, biology, and history.

Archaeological research depends on systematic collection of material objects together with adequate records of the circumstances of the finds and relationships among objects and their surroundings. Value attaches to objects so collected because of their status as documents, and is not intrinsic. Therefore, collecting practices which destroy data and thus prevent the scholarly goal of archaeology are censured.

Explicit permission of the property owner must be secured before excavation. State and federal statutes regarding preservation of antiquities and permits for excavation must be scrupulously observed.

Field techniques aim at preserving all recoverable information by means of adequate descriptive records and diagrams....

Certain basic field records must be kept, including the following: 1) A map of the site.... 2) Detailed written records..... 3) Stratigraphic relationships of data must be noted and preserved.... 4) A catalogue of all specimens found indicating their location, stratum of origin, and cultural association. Specimens should be labelled, numbered, and catalogued to preserve their identity as scientific data. 5) Photographs, drawings, and other documentation necessary to clarify the technique of the work and the context and associations of the finds.

Collections made by competent archaeologists must be available for examination by qualified scholars....

It is the scholarly obligation of the archaeologist to report ...findings in a recognized scientific medium....

Inasmuch as the buying and selling of artifacts usually results in the loss of context and cultural associations, the practice is censured...

Willful destruction, distortion, or concealment of the data of archaeology is censured....

Archaeology is a scholarly discipline requiring knowledge of field techniques, competence in laboratory analysis of specimens, and the ability to prepare a detailed report of the investigations and their implications in archaeology....(Vol. 27, No. 2, pp. 137-138).

ARCHAEOLOGY AND THE LAW IN GEORGIA

Without the proper permits and permissions, it is ***illegal*** *to*

...collect artifacts on public land.

...dig or disturb an archaeological site on public land or Georgia's waterways.

...disturb a human burial on either public or private land.

...to display any human remains in public.

...to sell artifacts that were ever associated with a human burial, or to bring such artifacts from another state in the U.S.

...to import artifacts taken illegally in a foreign country.

...to remove artifacts or disturb a site on private property without permission of the land owner.

...to receive stolen artifacts.

It is generally ***legal*** *to*

...own a collection of artifacts.

...surface collect on private land with the permission of the property owner.

Information for Authors

Type manuscripts on 8 1/2 x 11 inch paper, on one side only. Double-space all material, including bibliography, leaving at least a one-inch margin. Submit original copy. The same material on computer disk is recommended but not required for publication in *Early Georgia.* Footnotes are not permitted. Set text citations in parentheses, e.g. (Smith 1975: 101). Include a list of References Cited with full bibliographic information for each work cited in the text. For details of style and reference citation, consult *American Antiquity* 48:429-442, and *A Manual of Style,* 13th ed. or later, University of Chicago Press (1982). Submit your original illustrations (black-on-white drawings, glossy prints); size must be no larger than 6.5 x 4.25 inches. Provide all illustrations, whether maps, photographs, or drawings, with a brief descriptive caption and number them consecutively. Type tables on separate pages, number them in sequence, and give them headings.

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